PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-090109

(43)Date of publication of application : 31.03.2000

(51)Int.Cl. G06F 17/30

(21)Application number : 10-257213

(22)Date of filing : 10.09.1998

(71)Applicant : SHARP CORP

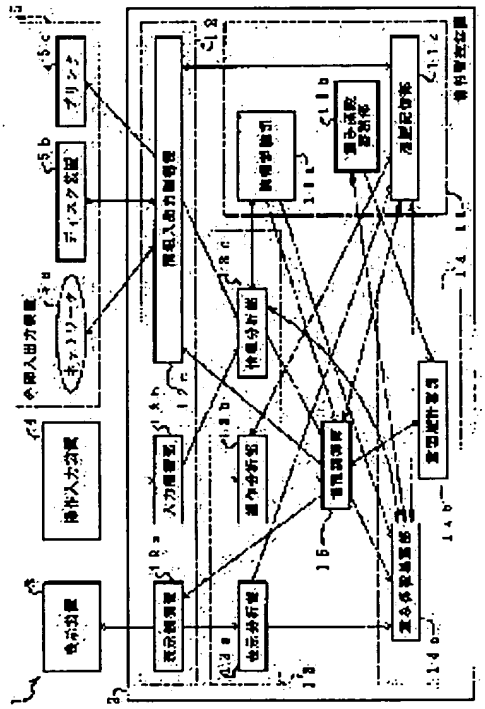
(72)Inventor : WADA MASAHIRO
NAKAGAWA KANJI
UTSUNOMIYA HAYATO
KAMAKURA TASHI
FURUKAWA KATSUYASU

(54) INFORMATION MANAGEMENT DEVICE AND RECORDING MEDIUM RECORDED WITH PROGRAM THEREOF

(57)Abstract:

PROBLEM TO BE SOLVED: To provide the information management device which is applicable over a wide range and can vary importance according to a user.

SOLUTION: When information is inputted, an information analysis part 13c of the information management device 2 calculates initial values of the file weight coefficient of a file to contain the information and the key word weight information of a key word constituting the information as initial values of weight coefficients and stores them in a weight coefficient storage part 11b. An importance calculation part 14b calculates the importance of each piece of information according to the weight coefficients. For example, when the user indicates the display, output, etc., of information, an operation frequency, a display time, etc., are stored in a history storage part 11c and a weight coefficient process part 14a adjusts the weight coefficients used to calculate the importance of the operated information. The weight coefficients are adjusted in normal operation, so the information management device 2 is able to calculate the importance of information matching the feeling



of the user even if the user does not manages the importance of the information.

LEGAL STATUS

[Date of request for examination]	27.07.2001
[Date of sending the examiner's decision of rejection]	
[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]	
[Date of final disposal for application]	
[Patent number]	
[Date of registration]	
[Number of appeal against examiner's decision of rejection]	
[Date of requesting appeal against examiner's decision of rejection]	
[Date of extinction of right]	

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1] Information-management equipment characterized by to have a weighting-factor storage means memorize the weighting factor used for significance calculation of the information which is created according to each information and related, a significance calculation means compute the significance of the information concerned based on the weighting factor relevant to information, and a weighting-factor adjustment means adjust the above-mentioned weighting factor according to the operation relevant to information.
[Claim 2] It is information management equipment according to claim 1 which is equipped with a history information-storage means by which the history information which shows the history of the operation relevant to information is stored, and is characterized by the above-mentioned weighting-factor adjustment means adjusting a weighting factor based on history information.
[Claim 3] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 2 characterized by changing the amount of adjustments of a weighting factor according to the time when operation was performed.
[Claim 4] It is information management equipment according to claim 1, 2, or 3 which the above-mentioned weighting-factor storage means is equipped with a file weighting-factor storage means by which the file weighting factor which is an informational storing unit, and which was prepared for every file is memorized as the above-mentioned weighting factor, and is characterized by the above-mentioned significance calculation means computing the significance of the information concerned based on the file weighting factor of the file by which information is accumulated.
[Claim 5] It is information management equipment according to claim 1, 2, or 3 which the above-mentioned weighting-factor storage means is equipped with a keyword weighting-factor storage means by which the keyword weighting factor which constitutes information, and which was prepared for every keyword is memorized as the above-mentioned weighting factor, and is characterized by the above-mentioned significance calculation means computing the significance of the information concerned based on the keyword weighting factor of each keyword which constitutes information.
[Claim 6] It is information-management equipment according to claim 5 carried out [that the above-mentioned weighting-factor storage means is equipped with a file weighting-factor storage means to by_which the file weighting factor which is an informational storing unit, and which was prepared for every file is memorized as the above-mentioned weighting factor, and the above-mentioned significance calculation means computes the significance of the information concerned based on the file weighting factor of the file which accumulates information, and the keyword weighting factor which constitutes the information concerned, and] as the feature.
[Claim 7] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 1, 2, 3, 4, 5, or 6 characterized by adjusting the above-mentioned weighting factor so that informational display time is long, and the significance of the information concerned may become large.
[Claim 8] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 1, 2, 3, 4, 5, or 6 characterized by the thing which was beforehand presumed to occur frequently when importance is attached to the information concerned among the operations relevant to information, and which adjust the above-mentioned weighting factor so that there is much number of times of the 1st-sort operation, and the significance of the information concerned may become large.
[Claim 9] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 1, 2, 3, 4, 5, or 6 characterized by adjusting the above-mentioned weighting factor so that the value which was beforehand presumed to occur frequently when importance is attached to the information concerned among the operations relevant to information, and which broke the number of times of the 1st-sort operation by elapsed time after information is created is large, and the significance of the information concerned may become large.
[Claim 10] Information management equipment according to claim 8 or 9 characterized by containing at least one of informational presenting, an output out of informational information management equipment, and contents change of information in the 1st-sort [above-mentioned] operation.
[Claim 11] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 8 or 9 characterized by changing the amount of adjustments of the above-mentioned weighting factor according to the contents of operation of the 1st-sort [above-mentioned] operation.
[Claim 12] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 11 with which the direction of display operation in which regeneration needs regeneration rather than unnecessary display operation is characterized by adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large.
[Claim 13] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 11 with which the output operation out of informational information management equipment is characterized by adjusting the above-mentioned weighting factor rather than informational display operation so that the amount of change of an informational significance may become large.
[Claim 14] The above-mentioned weighting-factor adjustment means is information management equipment according to

claim 11 with which the informational content change operation is characterized by adjusting the above-mentioned weighting factor rather than informational display operation so that the amount of change of an informational significance may become large.

[Claim 15] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 14 with which the output operation out of informational information management equipment is characterized by adjusting the above-mentioned weighting factor rather than informational content change operation so that the amount of change of an informational significance may become large.

[Claim 16] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 1, 2, 3, 4, 5, or 6 characterized by adjusting the above-mentioned weighting factor so that the significance of the information concerned may become small when the 2nd-sort operation beforehand presumed to occur frequently when the information concerned is unnecessary among the operations relevant to information is performed.

[Claim 17] It is information management equipment according to claim 5 or 6 which is equipped with a partial specification means to specify an informational operating part, and is characterized by the above-mentioned weighting-factor adjustment means adjusting the keyword weighting factor of the keyword contained in the operating part concerned.

[Claim 18] It is information management equipment according to claim 17 which the above-mentioned partial specification means specifies a part for an informational display as an operating part, and is characterized by the above-mentioned weighting-factor adjustment means adjusting a keyword weighting factor so that the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained when a certain keyword is contained in the operating part concerned.

[Claim 19] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 17 characterized by adjusting a keyword weighting factor so that the significance of the keyword concerned may become small rather than the case where the keyword concerned is not contained when a certain keyword is contained in the deleted operating part.

[Claim 20] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 5 or 6 characterized by adjusting a keyword weighting factor so that the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained when a certain keyword is contained in the inputted character string.

[Claim 21] It is information management equipment according to claim 20 which is equipped with a discernment means to discriminate the use of the above-mentioned input character string, and is characterized by the above-mentioned weighting-factor adjustment means changing the amount of adjustments of a keyword weighting factor according to the use of the above-mentioned input character string.

[Claim 22] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 21 characterized by adjusting the above-mentioned keyword weighting factor so that the amount of change of the significance of a keyword may become large rather than the case where a use is an informational new addition when the use of the above-mentioned input character string is information retrieval.

[Claim 23] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 21 characterized by adjusting the above-mentioned keyword weighting factor so that the significance of a keyword may become large rather than the case where a use is an informational new addition when the use of the above-mentioned input character string is informational contents correction.

[Claim 24] The above-mentioned weighting-factor adjustment means is information management equipment according to claim 23 characterized by adjusting the above-mentioned keyword weighting factor so that the significance of a keyword may become large rather than the case where a use is informational contents correction when the use of the above-mentioned input character string is information retrieval.

[Claim 25] The record medium with which the program which performs the significance calculation process which computes the significance of the information concerned among the weighting factors created according to each information based on the weighting factor relevant to information, and the weighting-factor adjustment process of adjusting the weighting factor used at the above-mentioned significance calculation process according to the operation relevant to information was recorded.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the information management equipment which manages various information, and the record medium with which the program was recorded, changing an informational significance according to a user.
[0002]
[Description of the Prior Art] Conventionally, managing various information is widely performed using the computer etc. By the spread of large capacity CD-ROM record media, growing gigantic of the information database by development of an information network, etc., the amount of information managed with these information management equipments is in the inclination which increases increasingly, and is exceeding the amount of information in which arrangement and management by the help are possible. So, in recent years, the technology of the automatic arrangement and management by information management equipment itself is proposed.
[0003] For example, information management equipment given in JP,5-20362,A is arranging each document by analyzing the contents of the text stored per document, and associating between each document automatically based on the significance of each keyword, while extracting automatically the phrase (keyword) used as the key of each information. Thus, when information management equipment supports, the time and effort at the time of taking out the information which a user needs out of a lot of information is mitigable.
[0004]
[Problem(s) to be Solved by the Invention] However, since the significance which a user senses differs for every user in many cases, with the above-mentioned conventional information management equipment, sufficient support which suited each user's intention produces the problem of being difficult.
[0005] Specifically, since the keyword was mechanically extracted from the informational contents and each information is managed, each information is classified according to the information management equipment of the above-mentioned composition from a common viewpoint by each user. On the other hand, generally the significance which a user senses changes for every user with various factors, such as a user's occupational description, interest, etc. Therefore, gap occurs between the significance which information management equipment manages, and the significance which the user of the information management equipment concerned senses, and the information management equipment of the above-mentioned composition is difficult for managing information with the significance according to each user. Consequently, with the above-mentioned information management equipment, the support which suited the user is difficult and it is hard to say that the time and effort for taking out the information which a user needs is fully cut down.
[0006] Here, the method into which each user is made to change the significance of a keyword is mentioned as a method of conquering the above-mentioned trouble. However, it is difficult even for a user to only usually recognize other size, ratios, etc. with significance of a keyword, and to set the significance of a keyword as a desired value, in case a user recognizes the significance of a keyword. Furthermore, since the amount of a keyword increases as an informational amount increases, with the above-mentioned composition, a user will manage a lot of keywords. Therefore, from informational significance management, while a user is opened wide, he newly needs to manage a keyword. Consequently, in order to take out required information, still, about much time and effort, it is required and has become a user's burden. Furthermore, there is also a possibility that it may become impossible to be unable to manage a keyword, with increase of amount of information.
[0007] As an option in which the significance which a user senses is made to reflect to information management equipment on the other hand, by JP,6-130921,A, the composition to which the learning control of the weighting factor at the time of display layout calculation is carried out is indicated so that the display layout based on the significance which information management equipment computed may be in agreement with the display layout which a user directs. However, with the composition concerned, since a user needs to specify desired value with learning control, information management equipment cannot apply to general operation.
[0008] Furthermore, a weighting factor given in the official report concerned is a parameter at the time of combining mutually basic importance functions in significance calculation, such as a structural importance function and a semantic importance function. So, correction of a weighting factor is difficult for being reflected as correction of the plan at the time of determining a display layout, and changing the significance of each information itself.
[0009] Moreover, since it is indispensable to express as the display layout according to significance, the kind of display and the use of information management equipment are limited. The scope of information management equipment will be limited these results.
[0010] this invention is to offer the information management equipment which can manage information, being made in view of the above-mentioned trouble, and being able to apply the purpose to the large range, and changing significance according to a user.
[0011]
[Means for Solving the Problem] In order to solve the above-mentioned technical problem, the information-management equipment concerning invention of a claim 1 is created according to each information, and is characterized by to have a

weighting-factor storage means memorize the weighting factor used for significance calculation of related information, a significance calculation means compute the significance of the information concerned based on the weighting factor relevant to information, and a weighting-factor adjustment means adjust the above-mentioned weighting factor according to the operation relevant to information.

[0012] In addition, by the time a significance calculation means ends informational significance calculation, as long as it can adjust a weighting factor, a weighting-factor adjustment means may update the value stored in the weighting-factor storage means, and after being read from a weighting-factor storage means, you may adjust, for example. Moreover, what is necessary is just to adjust at least one of the weighting factors, when two or more weighting factors are used, in case the significance of a certain information is computed. Moreover, each operation is good also considering the whole (file) information as a candidate for operation, and can also make informational [a part of] applicable to operation.

[0013] In the above-mentioned composition, every keyword which are every file which is an informational accumulation unit, and the unit which constitutes information is created according to each information, and a weighting factor is stored in a weighting-factor storage means. Moreover, a weighting-factor adjustment means adjusts the above-mentioned weighting factor, when operations relevant to information, such as operation to the information currently displayed and operation to the file by which information is accumulated, are performed for example. Furthermore, a significance calculation means computes the significance of the information concerned based on the weighting factor relevant to information.

[0014] According to the above-mentioned composition, even if, especially as for the significance of each information, a user does not direct significance, the information used as the candidate for operation, a file, the distribution of a keyword, a kind, timing of operation, etc. are automatically adjusted according to a user's operation inclination, for example. For example, if how the significance of the information concerned becomes large is chosen as the adjustment method of a weighting factor whenever information is operated, significance will become large more relatively [information with more number of times of operation]. Even if a user does not manage the keyword for reference or does not manage the significance of each information by this, information management equipment can compute the significance which suited each user. Consequently, in order to discover the information which a user needs, the time and effort at the time of arranging information is sharply reducible.

[0015] Moreover, the weighting factor is created according to information and adjusted according to the inclination of operation. Thus, since the significance of each information is learned with the learning system of an open sand mold, the weighting factor of each information can be adjusted irrespective of an informational significance. Therefore, while expressing each information as the layout according to significance, unlike the conventional technology which carries out the learning control of the weighting factor peculiar to a system, a scope is not limited but it can apply to the information management equipment in which the operation relevant to information is possible widely so that it may agree with the layout directed by the user.

[0016] The information management equipment concerning invention of a claim 2 is equipped with a history information-storage means by which the history information which shows the history of the operation relevant to information is stored in the composition of invention according to claim 1, and the above-mentioned weighting-factor adjustment means is characterized by adjusting a weighting factor based on history information.

[0017] With the above-mentioned composition, when operation relevant to information is performed, the history information which shows the operation concerned is stored in a history information-storage means. Here, if history information is referred to, a weighting-factor adjustment means can adjust a weighting factor, for example, even if it is a time of time having passed since the operation time, when a user directs informational significance calculation. Therefore, when significance calculation is directed, even if the adjustment method of a weighting factor is specified, a weighting factor can be adjusted by the adjustment method concerned. Consequently, information management equipment can compute an informational significance more flexibly.

[0018] Furthermore, the information management equipment concerning invention of a claim 3 is characterized by the above-mentioned weighting-factor adjustment means changing the amount of adjustments of a weighting factor according to the time when operation was performed in the composition of invention according to claim 2.

[0019] Generally, the significance which a user senses is changing in connection with the passage of time. Therefore, it is judged that it is important for a certain time, and even if it is the information operated frequently, it may be judged at another time that it is not not much important.

[0020] According to the above-mentioned composition, the amount of adjustments of a weighting factor is changed according to the time when operation was performed. Therefore, the amount of adjustments of the weighting factor resulting from operation of specific time can be set as a different value from the case in residual time. Thereby, in specific time, a user can increase the significance of the information conjectured to have judged that it is important. Consequently, the time and effort at the time of a user discovering the information on desired is further reducible.

[0021] Moreover, the information-management equipment concerning invention of a claim 4 is equipped with a file weighting-factor storage means to by_which the file weighting factor whose above-mentioned weighting-factor storage means is an informational storing unit and in which it was prepared for every file is memorized as the above-mentioned weighting factor in the composition of invention according to claim 1, 2, or 3, and the above-mentioned significance calculation means is carrying out computing the significance of the information concerned as the feature based on the file weighting factor of the file by which information is accumulated. In addition, as long as the significance calculation means is computing an informational significance based on a file weighting factor, it may compute significance for the below-mentioned keyword weighting factor etc. by using other weighting factors together.

[0022] With the above-mentioned composition, the file weighting factor used as a weighting factor is prepared for every file used as an informational accumulation unit, and is adjusted according to the operation relevant to information. Consequently, information management equipment can fluctuate an informational significance per file.

[0023] Here, in case a user operates information, he makes applicable to operation a file, such as opening the file by which the information concerned was accumulated and displaying information, in many cases. Therefore, the significance which suited a user's operation inclination can be computed and a user can discover required information early more because information management equipment fluctuates significance per file.

[0024] By the way, as the above-mentioned information, the information on various form, such as not only a character but a picture and voice, can be considered. Also in this, like the information which consists of a character, when information consists of keywords which are units with a meaning, if the weighting factor corresponding to a keyword is prepared, it is effective.
[0025] That is, the information-management equipment concerning invention of a claim 5 is equipped with a keyword weighting-factor storage means to by_which the keyword weighting factor from which the above-mentioned weighting-factor storage means constitutes information and which was prepared for every keyword is memorized as the above-mentioned weighting factor in the composition of invention according to claim 1, 2, or 3, and the above-mentioned significance calculation means is characterized by to compute the significance of the information concerned based on the keyword weighting factor of each keyword which constitutes information. In addition, as long as it is computing an informational significance based on a keyword weighting factor, you may use together other weighting factors, such as the above-mentioned file weighting factor.
[0026] With the above-mentioned composition, the keyword weighting factor used as a weighting factor is prepared for every keyword which constitutes information, and is adjusted according to the operation relevant to the information containing the keyword concerned. Therefore, when a certain information is operated, the significance of other information containing the keyword in the information concerned is adjusted.
[0027] Here, the information in which many keywords are contained in common is mutually similar contents in many cases, and a user also judges the information on contents similar to the information concerned to be important in many cases, when judging a certain information to be important. Therefore, by adjusting a keyword weighting factor, the significance which suited a user's operation inclination can be computed and a user can discover required information early more.
[0028] By the way, when a significance calculation means computes significance only based on a file weighting factor and a certain information is operated, only the significance of the information concerned changes and the significance of other information does not change. Therefore, in case information with contents similar to the information concerned is searched, this fear has time and effort. On the other hand, when computing significance only based on a keyword weighting factor, the significance of the operated information and the significance of information with contents similar to the information concerned become near, and there is a possibility of being hard that it may come to find the operated information.
[0029] On the other hand, the information management equipment concerning invention of a claim 6 In the composition of invention according to claim 5 the above-mentioned weighting-factor storage means The file weighting factor which is an informational storing unit and which was prepared for every file is equipped with the file weighting-factor storage means memorized as the above-mentioned weighting factor. the above-mentioned significance calculation means Based on the file weighting factor of the file which accumulates information, and the keyword weighting factor which constitutes the information concerned, it is characterized by computing the significance of the information concerned. In addition, as long as both weighting factors are used for informational significance calculation, you may use other weighting factors together.
[0030] With the above-mentioned composition, a significance calculation means computes significance based on a file weighting factor and a keyword weighting factor. Therefore, when a certain information is operated, while being able to change the significance of information with contents similar to the information concerned, the difference of the significance of the operated information and the significance of the above-mentioned analogous information can be maintained. Consequently, the information management equipment which can be discovered earlier is [the both sides of the information and analogous information which carried out the direct control] realizable.
[0031] Moreover, in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, the information management equipment concerning invention of a claim 7 is characterized by adjusting the above-mentioned weighting factor by the above-mentioned weighting-factor adjustment means so that informational display time is long, and the significance of the information concerned may become large.
[0032] In addition, display time may be time after being displayed on a screen until a display is completed, and is good also considering the time when two or more windows are overlapped, and a lap will be most displayed in the upper window (active window) if it is the display which can be displayed as display time. Moreover, while clocking the display time in each lap state independently, it is good also considering the value to which weight lapped to each display time so that it might become large, and the direction whose lap is a top attached and added the weight according to the state as display time.
[0033] According to the above-mentioned composition, if information is displayed, a weighting-factor adjustment means will adjust a weighting factor according to display time. Consequently, a weighting factor can be adjusted so that the information that display time is long may have a big significance relatively.
[0034] Compared with the information judged that the information which a user judges to be important is generally unnecessary, it is referred to frequently, and is displayed for a long time. Here, with the above-mentioned composition, since a weighting factor is adjusted according to display time, the significance which suited a user's operation inclination can be computed and a user can discover required information early more.
[0035] Furthermore, in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, the information management equipment concerning invention of a claim 8 is characterized by the thing for which the above-mentioned weighting-factor adjustment means was beforehand presumed to occur frequently when importance is attached to the information concerned among the operations relevant to information and which adjust the above-mentioned weighting factor so that there is much number of times of the 1st-sort operation, and the significance of the information concerned may become large.
[0036] When operations which occur frequently in case a user judges the information concerned to be important, such as operation relevant to a display, operation relevant to contents change, operation relevant to informational reference, and operation that outputs information out of information management equipment, are performed, for example according to the above-mentioned composition, the significance of the information concerned becomes large. Consequently, information management equipment can compute the significance which suited a user's operation inclination, and a user can discover required information early more.
[0037] On the other hand, the information management equipment concerning invention of a claim 9 In the composition of invention according to claim 1, 2, 3, 4, 5, or 6 the above-mentioned weighting-factor adjustment means It is characterized by adjusting the above-mentioned weighting factor so that the value which was beforehand presumed to occur frequently when

importance is attached to the information concerned among the operations relevant to information and which broke the number of times of the 1st-sort operation by elapsed time after information is created is large, and the significance of the information concerned may become large.

[0038] Here, generally, a user is created recently and attaches importance to the information used frequently in many cases at present. With the above-mentioned composition, when operation which occurs frequently in case the information concerned is judged to be important is performed, the significance of the information concerned becomes large. Moreover, the significance of the information concerned becomes small, so that the elapsed time after information is created increases. Consequently, even if it is the case that the number of times of operation is the same, significance of the information created recently can be enlarged and information management equipment can compute the significance more near a user's feeling.

[0039] Furthermore, the information management equipment concerning invention of a claim 10 is characterized by containing at least one of informational presenting, an output out of informational information management equipment, and contents change of information in the 1st-sort [above-mentioned] operation in the composition of invention according to claim 8 or 9.

[0040] According to the above-mentioned composition, when informational display operation, output operation, or contents change operation is performed, the significance of the information concerned becomes large. Here, as display operation, the display part change in a display start, a display halt, a whole display, sector display, and information, expansion, reduction, or the display-position change by the display screen is mentioned, for example. Moreover, printing, communication or record to a record medium, etc. is included in output operation. Furthermore, as contents change operation, the addition of the contents, correction of the contents, a partial copy, partial deletion, etc. exist. Also among the operations relevant to information, these operations are frequently performed, when the user attaches importance to the information concerned. Consequently, information management equipment can compute the significance more near a user's feeling by adopting these operations as the 1st-sort [above-mentioned] operation.

[0041] By the way, as mentioned above, operation of various kinds exists in operation relevant to information, and the influences which operation frequency and one operation give each kind of operation to an informational significance differ in many cases mutually.

[0042] For example, since it carries out when it will judge that a character input has very much number of times of operation, and updating whose user is information is required for operation of saving a document to an informational significance seldom changing by one operation, if the case where a certain document was being edited was made into the example, although there is comparatively little number of times of operation, an informational significance changes comparatively a lot.

[0043] Therefore, in case a weighting factor is adjusted according to operation, when it adjusts uniformly by operation of various kinds, a possibility that gap may occur is between the significance which information management equipment computes, and the significance which a user senses.

[0044] On the other hand, the information management equipment concerning invention of a claim 11 is characterized by the above-mentioned weighting-factor adjustment means changing the amount of adjustments of the above-mentioned weighting factor according to the contents of operation of the 1st-sort [above-mentioned] operation in information management equipment according to claim 8 or 9.

[0045] According to the above-mentioned composition, the amount of adjustments of a weighting factor changes according to the kind of operation. Consequently, gap between the significance which information computes, and the significance which a user senses can be reduced, and information management equipment can compute an informational significance more exactly.

[0046] Moreover, the information management equipment concerning invention of a claim 12 is characterized by the direction of display operation of needing regeneration adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means rather than the display operation with unnecessary regeneration in the composition of invention according to claim 11. In addition, as display operation which needs regeneration, back-scroll operation, change operation of a display position, etc. are mentioned.

[0047] When displaying many information simultaneously or displaying big information here, it is difficult to display all information required for a screen simultaneously. Therefore, pile up two or more information, and it displays, or displays informational [a part of] in many cases. In this case, since a user displays a desired portion, he rewrites a screen or displays again the information from which it separated from the viewing area of a screen using a back-scroll function etc. Consequently, for a user, an informational display state is changed frequently and regeneration of the more important information is carried out. According to the above-mentioned composition, in the information to which regeneration is carried out frequently, significance becomes high relatively. Thereby, information management equipment can compute an informational significance more exactly.

[0048] Moreover, the information management equipment concerning invention of a claim 13 is characterized by the direction of output operation out of informational information management equipment adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means rather than informational display operation in the composition of invention according to claim 11.

[0049] According to the above-mentioned composition, in the information by which output operation was carried out, significance becomes large relatively. Here, the user has the intention of making it refer to to many people, when outputting a part of information and information in many cases, and greater importance is attached than to the information currently used within information management equipment to the information concerned. Consequently, information management equipment can compute the significance more near a user's feeling.

[0050] On the other hand than informational display operation, the information management equipment concerning invention of a claim 14 is characterized by the direction of informational contents change operation adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means in the composition of invention according to claim 11.

[0051] According to the above-mentioned composition, when the contents are changed, an informational significance becomes large rather than the case where it is only displaying. Here, when a user changes the informational contents, the user has judged this information to be important in many cases. Therefore, information management equipment can compute an informational significance more exactly by enlarging relatively significance of the information for which the contents were changed.
[0052] Furthermore, the information management equipment concerning invention of a claim 15 is characterized by the direction of output operation out of informational information management equipment adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means rather than informational contents change operation in the composition of invention according to claim 14.
[0053] According to the above-mentioned composition, significance becomes large relatively in the turn of the outputted information, the information for which the contents were changed, and the displayed information. Therefore, information management equipment can compute significance more exactly.
[0054] On the other hand, when the 2nd-sort operation in which the information management equipment concerning invention of a claim 16 was beforehand presumed to occur frequently in the composition of invention according to claim 1, 2, 3, 4, 5, or 6 when the above-mentioned weighting-factor adjustment means has the unnecessary information concerned among the operations relevant to information is performed, it is characterized by adjusting the above-mentioned weighting factor so that the significance of the information concerned may become small. In addition, operations of deleting information, such as operation of deleting the file by which information was accumulated as the 2nd-sort operation, for example, are mentioned.
[0055] In the above-mentioned composition, if the 2nd-sort operation is performed, an informational significance will fall rather than the case where it is not operated. Here, the 2nd-sort operation is operation which occurs frequently when the user has judged information to be unnecessary. Therefore, information management equipment can compute the significance which suited a user's operation inclination, and a user can discover required information early more.
[0056] By the way, when the object of operation is informational [a part of], the user has paid attention also in information to the operating part in many cases. Therefore, like the above-mentioned claim 5 or information management equipment given in six, when the weighting factor corresponds to the unit smaller than information, information management equipment can compute the significance near a user's feeling by changing the amount of adjustments of a weighting factor by whether it is contained in the operating part.
[0057] The information management equipment concerning invention of a claim 17 is specifically equipped with a partial specification means to specify an informational operating part, in the composition of invention according to claim 5 or 6, and the above-mentioned weighting-factor adjustment means is characterized by adjusting the keyword weighting factor of the keyword contained in the operating part concerned.
[0058] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed by whether it is contained in the operating part. Thereby, information management equipment can compute the significance near a user's feeling.
[0059] Furthermore, the above-mentioned weighting-factor adjustment means is characterized by adjusting a keyword weighting factor so that, as for the above-mentioned partial specification means, the information management equipment concerning invention of a claim 18 specifies a part for an informational display as an operating part in the composition of invention according to claim 17, and the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained, when a certain keyword is contained in the operating part concerned.
[0060] According to the above-mentioned composition, the direction in case the significance of a keyword is included in a part for a display becomes large. Therefore, in the keyword displayed frequently, significance becomes large relatively. Consequently, information management equipment can compute the significance near a user's feeling.
[0061] Moreover, in the composition of invention according to claim 17, when a certain keyword is contained in the operating part from which the above-mentioned weighting-factor adjustment means was deleted, the information management equipment concerning invention of a claim 19 is characterized by adjusting a keyword weighting factor so that the significance of the keyword concerned may become small rather than the case where the keyword concerned is not contained.
[0062] According to the above-mentioned composition, the direction in case the significance of a keyword is included in a deletion becomes small. Therefore, in the keyword deleted frequently, significance becomes small relatively as a result of informational contents correction. Consequently, information management equipment can compute the significance near a user's feeling.
[0063] By the way, a keyword is contained not only in information but in character strings inputted by the user, such as a character string at the time of searching information. Here, generally, in case a user inputs a character string, he has inputted the character string to which the user itself attaches importance. Therefore, by whether it is contained in a user's input character string, if the amount of change of the significance of a keyword is changed, the significance near a user's feeling is computable.
[0064] More specifically than the case where the keyword concerned is not contained, when a certain keyword is contained in the character string into which the information management equipment concerning invention of a claim 20 was inputted in the composition of invention according to claim 5 or 6, the above-mentioned weighting-factor adjustment means is characterized by adjusting a keyword weighting factor so that the significance of the keyword concerned may become large.
[0065] According to the above-mentioned composition, in the keyword frequently contained in an input character string, significance becomes large relatively. Thereby, information management equipment can compute the significance near a user's feeling.
[0066] Furthermore, the information management equipment concerning invention of a claim 21 is equipped with a discernment means to discriminate the use of the above-mentioned input character string, in the composition of invention according to claim 20, and the above-mentioned weighting-factor adjustment means is characterized by changing the amount of adjustments of a keyword weighting factor according to the use of the above-mentioned input character string.

[0067] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed according to the use of an input character string. Here, as a use, contents correction of an informational new input and information, reference, etc. are mentioned, and input-statement character queue length differs from the grade than to which a user attaches greater importance to the keyword in an input character string in many cases, for example. Therefore, information management equipment is changing the amount of adjustments according to a use, and can compute the significance near a user's feeling.
[0068] Moreover, in the composition of invention according to claim 21, when the use of the above-mentioned input character string is information retrieval, the information management equipment concerning invention of a claim 22 is characterized by adjusting the above-mentioned keyword weighting factor by the above-mentioned weighting-factor adjustment means so that the amount of change of the significance of a keyword may become large rather than the case where a use is an informational new addition.
[0069] According to the above-mentioned composition, significance becomes large relatively rather than the keyword by which the keyword used in the case of information retrieval is used for a new input. Here, especially at the time of information retrieval, only the keyword to which the user attaches importance is inputted in many cases, and not only the keyword to which the user attaches importance but the keyword relevant to the keyword concerned is inputted in many cases especially at the time of a new input. Therefore, information management equipment is enlarging significance of the keyword used for information retrieval, and can compute the significance near a user's feeling.
[0070] On the other hand than the case where a use is an informational new addition, in the composition of invention according to claim 21, when the use of the above-mentioned input character string is informational contents correction, the information management equipment concerning invention of a claim 23 is characterized by adjusting the above-mentioned keyword weighting factor by the above-mentioned weighting-factor adjustment means so that the significance of a keyword may become large.
[0071] According to the above-mentioned composition, significance becomes large relatively rather than the keyword by which the keyword used for contents correction is used for a new input. Here, in many cases, compared with the time of a new input, at the time of contents correction, input-statement character queue length is short, and the content of the keyword to which importance is attached more is high to it. Therefore, information management equipment is enlarging significance of the keyword used for contents correction, and can compute the significance near a user's feeling.
[0072] Furthermore, in the composition of invention according to claim 23, when the use of the above-mentioned input character string is information retrieval, the information management equipment concerning invention of a claim 24 is characterized by adjusting the above-mentioned keyword weighting factor by the above-mentioned weighting-factor adjustment means so that the significance of a keyword may become large rather than the case where a use is informational contents correction.
[0073] According to the above-mentioned composition, as for the keyword used for information retrieval, compared with the keyword used for contents correction, a relative significance becomes still larger. Here, in many cases, compared with the input character string at the time of contents correction, the input character string at the time of information retrieval has short length, and its content of the keyword to which importance is attached is high. Therefore, information management equipment can enlarge further significance of the keyword used for information retrieval, and can compute the significance near a user's feeling.
[0074] Moreover, the record medium concerning invention of a claim 25 is characterized by to be recorded the program which performs the significance calculation process which computes the significance of the information concerned among the weighting factors created according to each information based on the weighting factor relevant to information, and the weighting-factor adjustment process of adjusting the weighting factor used at the above-mentioned significance calculation process according to the operation relevant to information, in order to solve the above-mentioned technical problem.
[0075] If the program concerned of the above-mentioned composition is executed by computer, like the information management equipment of a claim 1, a weighting factor will be created according to information and will be adjusted according to the inclination of operation. Therefore, even if it does not manage the significance of each information, information management equipment can compute the significance which suited each user, and in order that a user may discover required information, it can cut down sharply the time and effort at the time of arranging information.
[0076] Moreover, since the significance of each information is learned with the learning system of an open sand mold, the weighting factor of each information can be adjusted irrespective of an informational significance. Therefore, a scope is not limited but it can apply to the information management equipment in which the operation relevant to information is possible widely.
[0077]
[Embodiments of the Invention] [1st operation form] It is as follows when 1 operation form of this invention is explained based on drawing 1 or drawing 7 . That is, changing an informational significance according to a user, the intelligent manufacturing system program concerning this operation form is a system which manages various information, for example, when the information about a certain matter is sensed that a user is required, it emphasizes and displays the information that significance is big, and it is used in order to help discovery of the information concerned.
[0078] As shown in drawing 1 , the intelligent manufacturing system program 1 concerning this operation form The information management equipment 2 which stores Information D, and the display 3 which displays Information D, For example, the operation input units 4 which operate information management equipment 2, such as a keyboard and a mouse, For example, network 5a, disk unit 5b, or printer 5c etc., It has external I/O equipment 5 which exchanges the exterior and Information D on information management equipment 2, and the significance Xs which information management equipment 2 computes can be brought close to the significance Xu which a user senses based on operation of a user.
[0079] Specifically, the above-mentioned information management equipment 2 is equipped with information storage section 11a which stores the information D itself, weighting-factor accumulation section 11b in which it is created according to Information D and weighting-factor P for significance calculation of Information D is stored, and history storage section 11c updated according to operation of a user as the storage section 11. In addition, weighting-factor accumulation section 11b corresponds to a weighting-factor storage means given in a claim, a file weighting-factor storage means, and a keyword

weighting-factor storage means. Moreover, history storage section 11c corresponds to a history information-storage means.
[0080] Information storage section 11a concerning this operation form has memorized the field of a character string at least as information D. In addition, Information D may include the fields other than characters, such as a picture and voice.
[0081] Moreover, the file weighting factor FP by which the above-mentioned weighting-factor accumulation section 11b was prepared in every [which is the accumulation unit of each information D] file F as weighting-factor P, the keyword weighting factor KP prepared in every [which constitutes each information D] keyword K -- storing -- **** -- a certain information DA Significance XsA The information DA concerned File FA stored File weighting-factor FPA The information DA concerned Keyword KA1 to constitute -- Keyword weighting factor KPA1 -- It is computed by adding the sum total. In addition, below, the file weighting factor FP of explanation used for significance calculation of Information D for convenience and the keyword weighting factor KP are called weighting-factor [of the information D concerned] P.
[0082] Furthermore, for details, history storage section 11c mentions for example, display time, the number of times of operation, etc. later, although the information for adjusting each weighting-factor P is memorized according to operation of a user.
[0083] On the other hand, display-control section 12a, input-control section 12b, and information I/O control unit 12c are prepared as I/O control unit 12 for controlling each above-mentioned equipments 3-5. Moreover, display analysis section (partial specification means) 13a which analyzes the display of display 3 as the analysis section 13 for analyzing Information D and operation based on I/O of display-control section 12a, Operation analysis section 13b which analyzes operation of a user in which it is inputted through input-control section 12b from the operation input unit 4, The information D inputted through input-control section 12b or information I/O control unit 12c from the operation input unit 4 or external I/O equipment 5 was analyzed, and it has information-analysis section 13c which computes the initial value of weighting-factor P.
[0084] Moreover, it has weighting-factor processing section (weighting-factor adjustment means) 14a which processes weighting-factor P stored in the above-mentioned weighting-factor accumulation section 11b as operation part 14 for computing significance Xs, and significance calculation section (significance calculation means) 14b which computes significance Xs based on weighting-factor P. Furthermore, the information-control section (discernment means) 15 which controls each part 11-14 of the above is formed.
[0085] Each part 11-15 of the above may be functional modules realized when a computer executes a predetermined program, and may be peculiar hardware. However, when it realizes as a functional module, the record medium with which the above-mentioned program was recorded is only distributed, and information management equipment 2 can be realized.
[0086] In the above-mentioned composition, when operation of each part at the time of inputting Information D is explained based on drawing 2 , it is as follows. That is, in S1, if Information D is inputted into information management equipment 2, with information management equipment 2, weighting-factor P for computing the significance Xs of each information D will be generated in S2.
[0087] As shown in drawing 3 , when a user specifically generates Information D, in S11, input-control section 12b of information management equipment 2 judges that the input from the operation input unit 4 is Information D, and outputs the information D which the user generated to information-analysis section 13c. On the other hand, when Information D is incorporated from external I/O equipment 5, in S12, from the external I/O equipments 5, such as network 5a and disk unit 5b, information I/O control unit 12c of information management equipment 2 receives the information D concerned, and outputs it to information-analysis section 13c.
[0088] Even if it is which case, information-analysis section 13c accumulates the received information D to information storage section 11a of the storage section 11 in S13. As long as Information D includes the field D1 which consists of text information, as shown in drawing 4 , it may include for the picture etc. the field D2 which consists of information other than a character string, for example. Moreover, the file weighting factor FP used as one of the weighting-factor P is generated corresponding to the file F which is the accumulation unit of Information D, and is stored in weighting-factor accumulation section 11b (S14). In addition, the initial value of the file weighting factor FP may set the operation input unit 4, network 5a, etc. as the value which changes mutually with acquisition paths of Information D, and is good also as a fixed value.
[0089] Furthermore, in S15, information-analysis section 13c extracts text information from the inputted information D, and starts Keyword K by character string processing from the extracted text information by S16. Moreover, information-analysis section 13c performs weighting in each keyword K according to the frequency of occurrence, the appearance part in Information D, etc. in S17. This computes the initial value of the weighting factor KP of each keyword K, as shown in the following table 1. In addition, when weighting is performed according to the frequency of occurrence, the frequency of occurrence in other information D accumulated at information storage section 11a is also referred to.
[0090]
[Table 1]

キーワード	出現頻度	キーワード重み係数
ノートパソコン	25	154
コンピューティング	5	38
道具	8	5
コミュニケーション	6	1208
TFT	18	84
液晶	30	17

[0091] Consequently, the frequency of occurrence of Information D is high, and, as for the keyword K which appears on the

average to many information D, weight lower than the keyword K with the low frequency of occurrence is attached. Moreover, text information is structured, and when it consists of fields, such as a summary or the text, weight higher than the keyword K in which the keyword K contained to the field of a summary is contained to the field of the text is attached. In addition, in the above, although the method based on the frequency of occurrence and an appearance part was illustrated as an example of the initial value calculation method of the keyword weighting factor KP, it does not restrict to this and various methods can be adopted.

[0092] When a user directs significance calculation of Information D (in the case [S3] of YES), on the other hand in drawing 2 , information management equipment 2 In S4, based on weighting-factor P, compute the significance Xs of each information D, and it sets to S5. For example, it is shown that the information D that significance Xs is high is emphasized and displayed, or ranking ****** is carried out at the turn that significance Xs is high etc. so that a user can grasp the significance Xs which information management equipment 2 computed. It becomes easy for a user to acquire the information D which this judges that information management equipment 2 is important. Consequently, a user can take out the information D on desired by few time and effort, so that there is little gap with the significance Xs which information management equipment 2 computes, and the significance Xu which a user senses. In addition, S4 shown in drawing 2 corresponds to a significance calculation process given in a claim, and S7 corresponds to a weighting-factor adjustment process.

[0093] As mentioned above, with the information management equipment 2 concerning this operation form The keyword weighting factor KP which is the unit which constitutes Information D as an example of weighting-factor P, and the file weighting factor FP prepared in every [which is the accumulation unit of Information D] file F are used, and information management equipment 2 is set to the above S4. The significance Xs of the information D concerned is computed by adding total of the keyword weighting factor KP of each keyword K contained in a certain information D, and the file weighting factor FP of the file F which stores the information D concerned.

[0094] Here, since it is determined from the information D inputted as the calculation method defined beforehand in S1, if the initial value of weighting-factor P computed by the above S2 has the same both, it is the same between each information management equipment 2. Therefore, the significance Xs of the information D computed from these also serves as the same value between each information management equipment 2. On the other hand, since the significance Xu of the information D which a user senses differs for every user, they produces gap in the state [that weighting-factor P continues being initial value] between the significance Xs of the information D which information management equipment 2 presents.

[0095] However, the information management equipment 2 concerning this operation form adjusts weighting-factor P for computing the significance Xs of the information D concerned in the above S7, when operations relevant to Information D, such as a display, contents change or reference, an output, etc. of for example, the information D, are performed (in the case Above S6] of YES).

[0096] Thereby, in spite of not performing operations for managing the significance Xs of Information D, such as inputting the significance of a keyword, information management equipment 2 can bring the significance Xs which oneself computes close to the significance Xu which a user senses. Consequently, a user can take out the information D on desired by fewer time and effort, without managing the significance Xs of Information D.

[0097] If it is the method of adjusting as the adjustment method of weighting-factor P in the above S7 here according to the operation relevant to the information D, such as the contents of operation, frequency, and time when Information D is displayed by operation, for example, although arbitrary methods are applicable, this operation form explains weighting by display time as an example of the adjustment method.

[0098] Specifically, as shown in drawing 5 , it sets to S21, and it is a certain information DA. If a user directs a display, the directions concerned will be discriminated in operation analysis section 13b, and will be told to the information-control section 15 (S22). The information-control section 15 is Information DA if the notice concerned is received in S23. The instructions for performing a screen display are created and it sends to display-control section 12a. Thereby, in display 3, it is Information DA. It is displayed.

[0099] Furthermore, for the information-control section 15, it notifies that the screen display of Information DA was started in S24 to display analysis section 13a, it sets to S25, and display analysis section 13a is Information DA. Display time measurement is started.

[0100] On the other hand, it sets to S26 and a user is Information DA. If a display end is directed, the directions concerned will be discriminated in operation analysis section 13b, and will be told to the information-control section 15 (S27). It sets to S28 and the information-control section 15 is Information DA. The instructions for ending a screen display are created and it sends to display-control section 12a. Thereby, it is Information DA. A screen display is ended.

[0101] Furthermore, it sets to S29 and the information-control section 15 concerning this operation form is Information DA. It notifies that a screen display was ended to display analysis section 13a. On the other hand, in S30, display analysis section 13a is based on the notice concerned, and it is Information DA. Display time measurement is ended.

[0102] Here, the total display time T which shows total of the time when Information D was displayed is stored in history storage section 11c in the past corresponding to each information D. It sets to S31 and display analysis section 13a is Information DA. The total display time TA This display time is added. This addition result is the new total display time TA. It carries out and is stored in history storage section 11c. in addition -- for example, the display time TA total when displayed for the first time the case where it is not stored in history storage section 11c -- display analysis section 13a -- this display time -- the new total display time TA ****** -- it stores

[0103] Furthermore, weighting-factor processing section 14a is the information DA stored in history storage section 11c in S32. The total display time TA It refers to and is the total display time TA. It is the information DA concerned, so that it is long. Significance XsA It is the information DA concerned so that it may become large. Weighting-factor PA It adjusts.

[0104] For example, it is Information DB as shown in the following table 2. The total display time TB Information DA The total display time TA In the case of double precision, weighting-factor processing section 14a is Information DA. Weighting-factor PA To double precision, it is Information DB. Weighting factor PB It is made to increase. in addition -- Table 2 -- a comparison sake -- the total display time T -- differing -- for example, information DA, DB, and DC with other same conditions, such as weighting-factor [before adjustment] P, illustrating -- **** -- a weighting-factor ratio --

weighting-factor PA It is a ratio at the time of setting a value to 1.
[0105]
[Table 2]

	総表示時間〔秒〕	重み係数比
情報D_A	1000	1
情報D_B	2000	2
情報D_C	1500	1．5

[0106] With this operation form, as weighting-factor P, since the file weighting factor FP and the keyword weighting factor KP are used information DB File FB stored File weighting factor FPB Information DA File FA stored File weighting-factor FPA Only double precision increases and it is Information DB. Only the double precision of the keyword weighting factor KPA1 of the keyword KA1 contained in Information A increases the keyword weighting factor KPB1 of the keyword KB1 contained. Similarly, it is Information DC. Weighting-factor PC Information DA It increases by 1.5 times the weighting-factor PA.
[0107] Since processing of the above S21-S32 is carried out for other information D, in the longer information D, significance Xs increases [the total display time T] relatively, and significance Xs falls [the total display time T / the shorter information D] relatively.
[0108] Generally, the user of information management equipment 2 is operating the operation input unit 4, mainly looking at the information D displayed on the display screen of display 3. Therefore, the display time of the information D concerned is long, and there are so many bird clappers that the user has paid attention to a certain information D. Here, the total display time T of Information D conjectures information management equipment 2 that the user attaches importance to the information D concerned, so that it is long, and weighting-factor P is adjusted. Consequently, at the time of S2 shown in drawing 2 , though gap occurs between the significance Xu of the information D which a user senses, and the significance Xs which information management equipment 2 computes, whenever it repeats processing of the above S21-S32 (S3-S7 which are shown in drawing 2), gap is reduced. Consequently, information management equipment 2 can present the significance Xs which suited each user.
[0109] In addition, in this example, although the both sides of the file weighting factor FP and the keyword weighting factor KP are adjusted, you may adjust only one side. However, it is the information DA which the user displayed when adjusting only the file weighting factor FP. Significance XsA It is adjusted. Therefore, other information DB The contents are Information DA. Though it is similar, it is the information DB concerned. Significance XsB It does not change but is the information DB concerned. This fear has time and effort and time in reference.
[0110] It is the information DB which a user only operates it paying attention to one information D, and has the contents of analogous on the other hand when adjusting the keyword weighting factor KP. Significance XsB It goes up. Consequently, a user is the information DB concerned. It becomes easy to discover. however, the case where only the keyword weighting factor KP is adjusted -- both the information DA and DB Significance XsA and XsB Information DA which the user directed directly in order to change similarly Other information DB from -- it is hard coming to distinguish Consequently, information DA directed directly There is [time and effort or time] this fear to search.
[0111] On the other hand, with this operation form, two weighting-factor FP-KP is used together as weighting-factor P, and both sides are adjusted. Consequently, information DA directed directly It is the analogous information DB, without barring reference. It can be made easy to discover.
[0112] Moreover, although weighting-factor P was adjusted in the above-mentioned example so that the total display time T might be proportional to the rate of increase of weighting-factor P, it does not restrict to this. It may replace with the rate of increase, and you may adjust by increase width of face, and may adjust using other formulas. If it is the adjustment method that the significance Xs of Information D becomes large as the total display time T becomes long when it compares by the case where the total display time T differs, the same effect as this operation form will be acquired.
[0113] However, it is more desirable to adjust weighting-factor P so that it may change in the shape of S character to the total display time T as shown in drawing 6 in order for information management equipment 2 to compute the significance Xs more near a user's feeling. In this case, if weighting-factor P increases [the total display time T] gradually while it is few, and the total display time T increases, the inclination of weighting-factor P will become steep. Furthermore, weighting-factor P is the predetermined upper limit PLIM. If it approaches, weighting-factor P will go up gently. Thereby, change of the significance Xs resulting from the total display time T can be brought close to a user's feeling.
[0114] Moreover, when the time after information management equipment 2 starts operation becomes long, the total display time T of each information D becomes long, and there is a possibility that the significance Xs of each information D may approach. When File F or the display irrelevant to Keyword K continues, make it therefore, better for the file F concerned or weighting-factor P (KP-FP) of Keyword K to decrease gradually, as shown in drawing 7 . Thereby, even if time passes, the large range can be made to distribute the significance Xs of each information D, and it becomes easy for a user to discover the information D on desired.
[0115] In addition, in the above-mentioned example, although the total display time T of Information D itself is stored in history storage section 11c, it does not restrict to this. For example, you may compute the total display time of each information D by storing the time which directed the display start of each information D, and the time which directed a display halt of each information D. Moreover, when it can display, in case it indicates by multi-window one and it overlaps two or more information D, and display 3 measures display time, you may attach weight to the stacking-order grade of a display. If weighting-factor P of the information D concerned can be adjusted according to the display time of Information D even if it is which case, the same effect as this operation form will be acquired.
[0116] When adjusting weighting-factor P in [the 2nd operation form] and time based on the total display time T of Information D, the significance Xs of the information D currently displayed like a background of a screen will also increase.

Moreover, for example, when the user is separated from information management equipment 2, even if it is the case where the user is not gazing at the information D concerned, there is a possibility that significance Xs may increase.
[0117] With this operation form, the number of times of operation of Information D is explained as another scale at the time of adjusting weighting-factor P, referring to drawing 6 - drawing 9 . In addition, although various operations exist in operation to Information D, below, display start directions of Information D and display halt directions are made into an example, and are explained. In this case, since the processing about directions of a user or a screen display is the same as processing of drawing 5 , it gives the same reference mark to the same processing, and omits explanation. Moreover, with this operation form and the following operation forms, the composition of information management equipment 2 is the same as that of the 1st operation form, and since only operation of each part differs, it explains with reference to drawing 1 .
[0118] That is, in S21-S24 which are shown in drawing 8 , information management equipment 2 responds to directions of a user, and it is Information DA to display 3. Displaying, the information-control section 15 notifies a display start to display analysis section 13a. On the other hand, display analysis section 13a concerning this operation form is the information DA stored in history storage section 11c in S41. Number mA of operation times 1 **** is carried out.
[0119] Moreover, when a user directs a display end, it sets to S26-S29, and information management equipment 2 is the information DA on display 3. Suspending a display, the information-control section 15 notifies a display halt to display analysis section 13a. In this case, at S42, it is Information DA like the above S41. Number mA of operation times 1 **** is carried out. Thereby, the number of times m of operation of each information D is stored in history storage section 11c.
[0120] Furthermore, weighting-factor processing section 14a is the information DA stored in history storage section 11c in S43. Number mA of operation times It refers to and is number mA of operation times. It is the information DA concerned, so that many. Significance XsA It is the information DA concerned so that it may become large. Weighting-factor PA It adjusts.

[0121] For example, it is Information DB as shown in the following table 3. The number of times mB of operation Information DA Number mA of operation times In the case of double precision, weighting-factor processing section 14a is Information DA like S32 shown in drawing 5 . Weighting-factor PA Only double precision is Information DB. Weighting factor PB It is made to increase. In addition, in the following table 3, it is number mA of operation times because of comparison. It differs and they are information DA, DB, and DC with other same conditions. It has illustrated. Moreover, a weighting-factor ratio is weighting-factor PA. It is a ratio at the time of being referred to as 1.
[0122]
[Table 3]

	総操作回数 (回)	重み係数比
情報D_A	10	1
情報D_B	20	2
情報D_C	15	1. 5

[0123] Since processing of the above S21-S43 is carried out for other information D, in many information D, significance Xs increases [the number of times m of operation] relatively, and significance Xs falls [the number of times m of operation / the fewer information D] relatively.
[0124] Even if it is the information D currently displayed on the screen here, the information D which a user does not operate at all has that significance is [much] low compared with the information D operated frequently. For example, it is displayed as a background of a screen and, in many cases, the information D which is not operated has a low significance compared with the information D which is displayed on the window of the foremost of a screen and is operated frequently. Moreover, even if Information D is displayed for a long time, the user may be separated from information management equipment 2.
[0125] A user surmises that importance is attached to the information D concerned, and adjusts weighting-factor P, so that the information management equipment 2 concerning this operation form has much number of times m of operation of Information D. Therefore, a user can adjust weighting-factor P irrespective of the length of the period which is separated from information management equipment 2. In addition, like the 1st operation form, since weighting-factor P is adjusted according to the number of times m of operation, even if it is the case where it uses together with the adjustment based on the total display time T, change of weighting-factor P resulting from the period when the user is separated from information management equipment 2 can be suppressed relatively. The significance Xs which information management equipment 2 computes can be brought close to the significance Xu which a user senses these results.
[0126] In addition, although the case where display start operation and halt operation were counted was made into the example above and explained, it does not restrict to this. The same effect will be acquired if operation of a kind in which the information D concerned was conjectured to be important for the user is counted. As an example, operation of a kind of changing the contents of the information D, such as correction, an addition, a partial copy, or partial deletion of operation of a kind of changing a display state, such as regeneration and an enlarged display, for example, the contents of Information D, operation of the kind outputted for example, out of the information management equipments 2, such as a copy, printing, or transmission to an external record medium, etc. are mentioned. Furthermore, as an object of operation, a part of information D currently displayed, information D, or the file F which stores Information D is mentioned. For example, a user is File FA when counting the number of times of operation of File F. Whenever it uses it, it is number mA of operation times of the file F concerned. It is added every [1] and weighting-factor P of the information D stored in File F is adjusted according to the number of times m of operation of each file F. Since a user can guess beforehand operation of the kind which attaches importance to the information D concerned even if it is which case, when these kinds of operations are performed, information management equipment 2 counts the number of times of operation, and can adjust weighting-factor P of the information D relevant to operation.
[0127] In addition, the adjustment method of weighting-factor P according to the number of times m of operation can adopt various methods, such as increase width of face, the rate of increase or proportionality, and arbitrary functions, like the 1st

operation form. If it is the adjustment method that the significance Xs of a certain information D rises so that there is much number of times of operation even if it is which case, the same effect as this operation form will be acquired.
[0128] However, like the 1st operation form, as shown in drawing 6 , change of the significance Xs to which the direction which adjusted weighting-factor P so that it might change in the shape of S character to the number of times m of operation originates in the number of times m of operation can be brought close to a user's feeling. Moreover, as shown in drawing 7 , when the operation irrelevant to File F and Keyword K continues, it becomes easy to discover the information D on desired to decrease gradually the file F concerned or weighting-factor P (KP-FP) of Keyword K.
[0129] On the other hand, when operation of a kind in which the information D is conjectured to be unnecessary is performed, information management equipment 2 makes it better for weighting-factor P of the information D concerned to fall with the increase in the number of times m of operation for users, such as deletion of Information D, as shown in drawing 9 . Since the kind concerned of operation can also be guessed beforehand, information management equipment 2 can adjust weighting-factor P of the information D relevant to operation convenient at all, when these kinds of operations are performed.
[0130] The case where each operation was counted equally was explained as an example of [the 3rd operation form] and how to count the number of times of operation with the 2nd operation form in time. However, operations of the specific kind which occurs frequently when the user attaches importance to Information D, such as for example, back-scroll operation, exist in actual operation. Therefore, by the case where the specific kind concerned of operation is performed, and the case where residual operation is performed, when weighting-factor P is adjusted similarly, a possibility that gap may occur is between the significance Xs which information management equipment 2 computes, and the significance Xu which a user senses.
[0131] On the other hand, with this operation form, while counting operation of the above-mentioned specific kind etc., for example, refers to drawing 10 - drawing 13 about the case where weighting-factor P is adjusted according to the contents of operation of Information D, it explains. In addition, below, the operations to which regeneration of the same portion in Information D is carried out, such as back-scroll operation, are explained as an example of specific operation.
[0132] That is, it sets to S51 shown in drawing 10 , and is Information DA. When a user directs so that a certain inner portion AA 1 may be displayed, the information-control section 15 creates the instructions for displaying the portion AA 1 concerned in S52 based on directions of a user. According to the instructions concerned, display-control section 12a is Information DA, as shown on the screen of display 3 at drawing 11 . The portion AA 1 as which it was instructed [inner] is displayed.
[0133] Furthermore, the information-control section 15 notifies that the screen display of the portion AA 1 concerned was started to display analysis section 13a in S53. Moreover, display analysis section 13a judges whether it collated whether the partial information bus available 1 which shows the portion AA 1 concerned would be stored in history storage section 11c, and the portion AA 1 concerned was displayed in the past in S54. For example, in the example shown in drawing 12 , the partial information bus available 2 stored in history storage section 11c shows the portion AA 2, and differs from the portion AA 1 currently displayed now. Thus, it is ****** if, as for display analysis section 13a, the portion AA 1 concerned was not displayed in the past when the partial information bus available 1 which shows the above-mentioned portion AA 1 was not stored in history storage section 11c. In this case, display analysis section 13a creates the partial information bus available 1, and stores it in history storage section 11c (S55).
[0134] On the other hand, when the portion AA 1 is displayed in the past (in the case [Above S54,] of YES), for example, as shown in drawing 13 , the partial information bus available 1 which shows the portion AA 1 currently displayed is already stored in history storage section 11c now. In this case, for display analysis section 13a, a user is Information DA. It receives, judges that regeneration operation was performed and is Information DA. The number of times dA of regeneration operation 1 **** is carried out. The number of times dA of regeneration operation concerned It is stored in history storage section 11c (S56).
[0135] Furthermore, it sets to S57 and weighting-factor processing section 14a is Information DA. The number of times dA of regeneration operation It refers to and is the number of times dA of regeneration operation. It is the information DA concerned, so that many. Significance XsA It is the information DA concerned so that it may become large. Weighting-factor PA It adjusts.
[0136] For example, it is the number of times dA of regeneration operation because of comparison. It differs and they are the information DA with other same conditions, and DB. If it is made an example and explains Information DB Number dB of regeneration operation times Information DA The number of times dA of regeneration operation In the case of double precision, weighting-factor processing section 14a is Information DA like the above-mentioned table 3. Weighting-factor PA Only double precision is Information DB. Weighting factor PB It is made to increase.
[0137] Since processing of the above S51-S57 is carried out for other information D, in many information D, significance Xs increases [the number of times d of regeneration operation] relatively, and significance Xs falls [the number of times d of regeneration operation / the fewer information D] relatively. Thereby, information management equipment 2 can compute the significance Xs near a user's feeling.
[0138] In addition, above, although the number of times d of regeneration operation was counted, it does not restrict to this. The same effect is acquired, even when it was the operation which occurs frequently when the user attaches importance to Information D and other operations are counted as operation of the specific kind defined beforehand.
[0139] Furthermore, operation of two or more kinds may be counted as operation of a specific kind, and weighting-factor P may be changed for every operation. For example, the operation which displays Information D, operation of correcting the contents of Information D, the operation which copies Information D to record media of portability, such as a floppy disk, the operation which communicates the information D concerned, such as an E-mail, and the operation which prints Information D are counted as operation of the above-mentioned specific kind, respectively. Furthermore, the increase rate of weighting-factor P at the time of display operation is set to 1, 2 and the increase rate at the time of communication operation are changed in 1.5 and the increase rate at the time of copy operation, and 2.5 and the increase rate at the time of printing operation change [the increase rate of weighting-factor P at the time of a transfer method] the increase rate of weighting-factor P for every operation like 3.

[0140] Generally, when operation which outputs Information D to the exterior of the information management equipments 2, such as printing of Information D, communication, and a copy, is performed, the user is going to make many people utilize the information D concerned in many cases, and compared with the case where Information D is being processed in the information management equipment 2 interior, it can be surmised that the user attaches importance to Information D. Moreover, since a user does not correct the contents of Information D in many cases as long as there is no need, a user is conjectured to attach importance to the information D which corrected the contents compared with the information D only displayed. Therefore, if weight is attached in order of display operation, a transfer method, copy operation, communication operation, and printing operation and weighting-factor P of Information D is adjusted as mentioned above, information management equipment 2 can compute the significance Xs still near a user's feeling.
[0141] In addition, although the case where each number of times of operation was counted independently was made into the example above and explained, it does not restrict to this. For example, you may attach weight in the stage of counting, such as counting printing operation with three batches of a transfer method. If the range of fluctuation of significance Xs can be changed for every operation of an above-mentioned specific kind irrespective of whether the number of times of operation is set aside, the same effect as this operation form will be acquired.
[0142] In [the 4th operation form] and time, irrespective of whether the candidate for operation is the whole information D with the above 1st or the 3rd operation form, display time and the number of times of operation were counted to every information D, and the case where weighting-factor P used by significance calculation of Information D was adjusted was explained. On the other hand, with this operation form, when the candidate for operation is a part of information D, the case where weighting-factor P relevant to the portion concerned is adjusted is explained based on drawing 14 and drawing 15 . In addition, below, sector display is made into an example and the operation which makes a part of information D applicable to operation explains it, although various operations are mentioned.
[0143] That is, in S61 shown in drawing 14 , whenever a screen display of the information D is carried out, for example based on the notice from the information-control section 15 etc., display analysis section 13a judges which portion A is displayed among Information D, and notifies it to weighting-factor processing section 14a. On the other hand, in S62, weighting-factor processing section 14a is requested from information-analysis section 13c, and as shown in drawing 15 , it extracts the keyword contained in the portion A concerned. Furthermore, in S63, weighting-factor processing section 14a counts the number of times of operation for example, in each keyword K of every, adjusts the keyword weighting factor KP according to the number of times of operation, and it adjusts the keyword weighting factor KP of the keyword K concerned so that significance Xs may become large rather than the case where the keyword K concerned is not contained in Portion A.
[0144] In addition, the adjustment method of the keyword weighting factor KP may be adjusted like the 2nd or 3rd operation form, without distinguishing various operations, and may attach weight for every kind of operation. Moreover, when it is the operation conjectured that the candidate for operation is [a user] unnecessary, deletion for operation etc. adjusts the keyword weighting factor KP so that the significance Xs of Keyword K may decrease.
[0145] Even if it was which case, when a part of information D is operated, whether each keyword K in the information D concerned is contained in the candidate for operation can adjust the keyword weighting factor KP of Keyword K individually. Therefore, information management equipment 2 can compute the significance Xs more near a user's feeling.
[0146] [5th operation form] Although the 4th operation form explained the case where the keyword weighting factor KP was adjusted, by whether it is contained in the candidate for operation of Information D, Keyword K is not contained in Information D and contained also in the character string which users, such as a reference character string, input. With this operation form, adjustment of the keyword weighting factor KP according to the input character string is explained, referring to drawing 16 .
[0147] That is, in S71, if a user inputs a character string for reference, correction of Information D, etc., input-control section 12b of information management equipment 2 will notify the inputted character string to information-analysis section 13c. Furthermore, information-analysis section 13c extracts the keyword K contained in the input character string in S72.
[0148] On the other hand, in S73, the information-control section 15 investigates the situation (mode) of the information management equipment 2 at the input time, discriminates the use of the input character string concerned, and notifies it to weighting-factor processing section 14a. Furthermore, weighting-factor processing section 14a adjusts the keyword weighting factor KP of each keyword K according to a situation (S74).
[0149] For example, when it is the situation that information management equipment 2 newly creates File F, weighting-factor processing section 14a sets the rate to which the keyword weighting factor KP is made to increase as 1. When information management equipment 2 suits the situation which updates Information D contrary to this, weighting-factor processing section 14a sets the rate to which the keyword weighting factor KP is made to increase as 1.5. Moreover, in the case of the situation of searching Information D, the keyword weighting factor KP increases at a rate of 2.
[0150] As for the keyword K contained in the character string which the user inputted, according to the above-mentioned composition, the keyword weighting factor KP becomes large rather than the case where the keyword K concerned is not contained in an input character string. Furthermore, even if it is the case where it is contained in an input character string, the keyword weighting factor KP of Keyword K becomes large in order of new creation, updating, and reference.
[0151] Generally, in case a user inputs a character string, he has inputted the character string to which the user itself attaches importance. Therefore, information management equipment 2 can compute the significance Xs near a user's feeling by enlarging significance of the keyword K contained in a user's input character string.
[0152] Furthermore, a string length has many bird clappers short in order of new creation, updating, and reference. Especially, at the time of reference, the keyword K to which the user attaches importance is inputted in many cases, and not only the keyword K to which importance is attached but other keywords K are inputted at the time of new creation. Therefore, according to the use of a character string, information management equipment 2 can compute the significance Xs still near a user's feeling by adjusting the keyword weighting factor KP as mentioned above.
[0153] In [the 6th operation form] and time, how (the 1st method) to adjust weighting-factor P was explained according to all the operation situations after the information D (file F), such as the total display time T and total number-of-times of operation m (d), is generated with the above 1st or the 5th operation form, for example. According to this method, when responding to the number of times m of operation, since significance Xs increases [the number of times m of operation]

many information D, information management equipment 2 can present a mutually different significance Xs about the information D from which the number of times m of operation differs, as shown in drawing 17 .
[0154] However, file FA which was created one year ago and operated n times by this 1st method at the time, for example as shown in drawing 18 Stored information DA Significance XsA File FB which was created recently and operated n times Stored information DB Significance XsB It will become the same.
[0155] Information DB operated frequently here general recently Information DA operated frequently once It is common for the significance Xs in this time to be high. Therefore, if weighting-factor P is adjusted by the 1st method, they are both the above-mentioned significance XsA and XsB. A value becomes near and a user is Information DB. There is a possibility of being hard that it may come to discover.
[0156] On the other hand, weighting-factor processing section 14a concerning this operation form is the elapsed time R after File F is created until it continues till present as the 2nd method, and changes weighting-factor P according to the value (m/R) which broke the total number of times m of operation. In addition, elapsed time R is computable from the date and time of creation stored as an attribute of Information D.
[0157] With this operation form, weighting-factor processing section 14a is replaced with the number of times m of operation, and adjusts weighting-factor P according to m/R. Therefore, the number of times m of operation which needs the longer information D for maintenance of weighting-factor P becomes [elapsed time R] large, and significance Xs falls relatively. Consequently, information management equipment 2 can compute the significance Xs still near the feeling of the user in this time.
[0158] Although [the 7th operation form], the total display time T, the number of times m of operation stored in history storage section 11c with the 1st or 6th operation form in time, etc. explained the case where it was updated at the time of operation, the method of asking for the total display time T and the number of times of operation is not restricted to this.
[0159] With this operation form, at the time of operation, the history information H containing operation time etc. is stored in history storage section 11c, and the case where significance Xs is computed is explained based on the history information H concerned. In addition, for convenience, in the 2nd operation form, the case of explanation where the history information H is stored is made into an example, and, below, it explains.
[0160] That is, in S81, as shown in drawing 19 , if a user operates Information D, the information-control section 15 stores the history information H on operation in S82. The time of operation, and in case significance Xs is computed later, required information is included in the history information H concerned. For example, when computing significance Xs based on the number of times of operation to Information D, the operated time and the information D used as the candidate for operation are included in the history information H.
[0161] Furthermore, in case significance Xs is computed, in S83, based on the history information H on each information D, weighting-factor processing section 14a adjusts each weighting-factor P, and computes significance Xs.
[0162] Here, at this operation form, weighting-factor processing section 14a is the history information H to each information DA stored in history storage section 11c. If the related history information H is extracted, respectively, the number of times m of operation of each information D is computable. Therefore, weighting-factor processing section 14a can adjust weighting-factor P of each information D like the 1st method of the above, and the 2nd method according to the value which broke the number of times m of operation, or the number of times m of operation by elapsed time R.
[0163] Furthermore, with this operation form, since the history information H is stored, in addition to the 1st method of the above, and the 2nd method, the 3rd method of attaching weight according to operation time can be chosen.
[0164] For example, when the rate to which weighting-factor P is made to increase when it is used once in one month recently is set to 1, weight is attached so that weight may become small in the period of a three months before [9 or 2 months before 0.] about the case where it is used once for the period of a two months before [one month / past / before] as the time of operating it like 0.8 separates from this time, and weighting-factor P is adjusted. Thereby, as shown in drawing 20 , even if elapsed time R and the number of times m of operation are the same, the significance Xs of the information D operated more recently can be increased relatively. Consequently, information management equipment 2 can compute the significance Xs which suited a user's feeling further.
[0165] Here, although the case where weight was attached according to a difference with this time was explained above, it does not restrict to this. If weight is attached according to a difference with arbitrary times, the significance Xs which suited the feeling of the user at the time concerned is computable. Generally, the significance Xu which a user senses is not always consistent, and changes in many cases with the passage of time. Therefore, a user may search Information D based on the information D it was considered at a certain time that was important. In this case, it is called for that information management equipment 2 computes the significance Xs near the feeling of the user in a certain time. By the 3rd method, the significance Xs in arbitrary times is computable by computing the history information H. Furthermore, since history storage section 11c stores the history information H, according to a demand of a user, the arbitrary methods of the 1st method - the 3rd method can be chosen. Therefore, the time and effort at the time of a user discovering the information D on desired is sharply reducible.
[0166] In addition, although the case where information required for significance calculation with the 2nd operation form was memorized as history information H was made into the example and the above explained, if information required for significance calculation with the 1st or 5th operation form is memorized, the same effect will be acquired even if it applies to any.
[0167] When it applies to the 3rd operation form especially, it is at the significance calculation time, and while being able to specify operation of a specific kind, weighting during [various] operation can be changed. For example, if weight of printing operation is made heavy, significance Xs of the information D by which communication operation was carried out can be enlarged. Therefore, the method at the time of information management equipment 2 computing significance Xs can be changed more flexibly, and the time and effort at the time of a user discovering the information D on desired can be cut down sharply.
[0168] By the way, when it stores the history information H, much storage capacity is needed compared with the case where the total display time T and number-of-times of operation m (d) are stored. However, since storage capacity required for storing of the history information H has that it is [much] very smaller than storage capacity required for storing of

Information D, the storage capacity of the information management equipment 2 whole seldom increases.
[0169] in addition, above-mentioned every -- the adjustment method of weighting-factor P explained with the 1st or 7th operation form can be used together in arbitrary combination In this case, since weighting-factor P can be adjusted according to various kinds of operations, information management equipment 2 can compute the significance Xs still near a user's feeling. If the existence of regeneration, the existence of an external output, etc. adjust weighting-factor P especially based on mutually different operation, since weighting-factor P can be adjusted according to large general operation, information management equipment 2 can compute significance Xs more exactly.
[0170] Moreover, although the case where the significance Xs of Information D increased was explained with each above-mentioned operation form when weighting-factor P increased, it does not restrict to this. For example, the same effect will be acquired if weighting-factor P can be adjusted so that the significance Xs of each above-mentioned operation form and Information D may change similarly even if it is the case where significance Xs is computed by other methods when weighting-factor P increases, and the significance Xs of Information D decreases.
[0171] Furthermore, although the case where weighting-factor P used for significance calculation of the information D concerned was adjusted was explained with each above-mentioned operation form when operation relevant to Information D was performed, you may adjust weighting-factor P which is not used for significance calculation of for example, not only this but the information D. The same effect will be acquired if the size of weighting-factor P used for significance calculation and the size of residual weighting-factor P can be changed relatively.
[0172]
[Effect of the Invention] The information-management equipment concerning invention of a claim 1 is composition equipped with a weighting-factor storage means memorize the weighting factor used for significance calculation of the information which is created according to each information and related as mentioned above, a significance calculation means compute the significance of the information concerned based on the weighting factor relevant to information, and a weighting-factor adjustment means adjust the above-mentioned weighting factor according to the operation relevant to information.
[0173] According to the above-mentioned composition, a weighting factor is created according to information and adjusted according to the inclination of operation. Therefore, even if a user does not manage the significance of each information, information management equipment can compute the significance which suited each user. Consequently, in order to discover the information which a user needs, the effect that the time and effort at the time of arranging information is sharply reducible is done so. Moreover, since the significance of each information is learned with the learning system of an open sand mold, the effect of being widely applicable to the information management equipment in which the operation relevant to information is possible is done so.
[0174] The information management equipment concerning invention of a claim 2 is equipped with a history information-storage means by which the history information which shows the history of the operation relevant to information is stored in the composition of invention according to claim 1 as mentioned above, and the above-mentioned weighting-factor adjustment means is the composition of adjusting a weighting factor based on history information.
[0175] With the above-mentioned composition, when operation relevant to information is performed, the history information which shows the operation concerned is stored in a history information-storage means. Therefore, when significance calculation is directed, even if the adjustment method of a weighting factor is specified, a weighting factor can be adjusted by the adjustment method concerned, and information management equipment does so the effect that an informational significance can be computed more flexibly.
[0176] The information management equipment concerning invention of a claim 3 is the composition that the above-mentioned weighting-factor adjustment means changes the amount of adjustments of a weighting factor according to the time when operation was performed, in the composition of invention according to claim 2 as mentioned above.
[0177] According to the above-mentioned composition, in specific time, a user can increase the significance of the information conjectured to have judged that it is important. Consequently, the effect that the time and effort at the time of a user discovering the information on desired is further reducible is done so.
[0178] The information management equipment concerning invention of a claim 4 is the composition that the above-mentioned significance calculation means computes the significance of the information concerned based on the file weighting factor of the file by which information is accumulated, in the composition of invention according to claim 1, 2, or 3 as mentioned above.
[0179] With the above-mentioned composition, the file weighting factor used as a weighting factor is prepared for every file used as an informational accumulation unit, and is adjusted according to the operation relevant to information. Consequently, information management equipment can fluctuate an informational significance per file, and does so the effect that the time and effort at the time of information retrieval is reducible.
[0180] The information management equipment concerning invention of a claim 5 is composition which computes the significance of the information concerned based on the keyword weighting factor of each keyword from which the above-mentioned significance calculation means constitutes information in the composition of invention according to claim 1, 2, or 3 as mentioned above.
[0181] With the above-mentioned composition, when a certain information is operated, the significance of other information that the keyword in the information concerned is contained can be adjusted, and the effect that the time and effort at the time of information retrieval is reducible is done so.
[0182] The information management equipment concerning invention of a claim 6 is composition which computes the significance of the information concerned based on the file weighting factor of the file to which the above-mentioned significance calculation means accumulates information, and the keyword weighting factor which constitutes the information concerned in the composition of invention according to claim 5 as mentioned above.
[0183] According to the above-mentioned composition, the significance of analogous information can be adjusted, maintaining the difference of the significance of the operated information, and the significance of the above-mentioned analogous information. Consequently, the effect that the information management equipment which can be discovered earlier is [the both sides of the information and analogous information which carried out the direct control] realizable is done so.
[0184] As mentioned above, the information management equipment concerning invention of a claim 7 is the composition of

adjusting the above-mentioned weighting factor so that informational display time is long in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, and the significance of the information concerned may become large.
[0185] According to the above-mentioned composition, a weighting factor can be adjusted and the effect that the time and effort at the time of information retrieval is reducible is done so so that the information that display time is long may have a big significance relatively.
[0186] It is the composition beforehand presumed that it occurs frequently as mentioned above in the composition of invention according to claim 1, 2, 3, 4, 5, or 6 when the information management equipment concerning invention of a claim 8 attaches importance to the information concerned among the operations relevant to information of adjusting the above-mentioned weighting factor so that there is much number of times of the 1st-sort operation and the significance of the information concerned may become large.
[0187] When operation which occurs frequently in case a user judges the information concerned to be important is performed according to the above-mentioned composition, the significance of the information concerned becomes large. Consequently, information management equipment can compute the significance which suited a user's operation inclination, and does so the effect that the time and effort at the time of information retrieval is reducible.
[0188] The information management equipment concerning invention of a claim 9 is the composition of adjusting the above-mentioned weighting factor so that the value which broke the number of times of the 1st-sort operation by elapsed time among the operations relevant to information is large as mentioned above in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, and the significance of the information concerned may become large.
[0189] According to the above-mentioned composition, even if it is the case that the number of times of operation is the same, significance of the information created recently can be enlarged. Consequently, information management equipment does so the effect that the significance more near a user's feeling is computable.
[0190] The information management equipment concerning invention of a claim 10 is the composition that at least one of informational presenting, an output out of informational information management equipment, and contents change of information is contained in the 1st-sort [above-mentioned] operation, in the composition of invention according to claim 8 or 9 as mentioned above.
[0191] In the information to which the display and the output out of information management equipment were performed, and a contents change was made, with the above-mentioned composition, significance becomes large relatively. Consequently, information management equipment does so the effect that the significance more near a user's feeling is computable.
[0192] The information management equipment concerning invention of a claim 11 is the composition of changing the amount of adjustments of the above-mentioned weighting factor according to the contents of operation of the 1st-sort above-mentioned] operation, in information management equipment according to claim 8 or 9 as mentioned above.
[0193] According to the above-mentioned composition, since it changes according to the kind of operation, the amount of adjustments of a weighting factor can reduce gap between the significance which information computes, and the significance which a user senses. Consequently, information management equipment does so the effect that a more exact significance is computable.
[0194] The information management equipment concerning invention of a claim 12 is the composition that the direction of display operation of needing regeneration in the composition of invention according to claim 11 adjusts the above-mentioned weighting factor so that the amount of change of an informational significance may become large, as mentioned above.
[0195] According to the above-mentioned composition, in the information to which regeneration is carried out frequently, significance becomes high relatively. Thereby, information management equipment does so more exactly the effect that an informational significance is computable.
[0196] The information management equipment concerning invention of a claim 13 is the composition that the direction of output operation [operation / display / informational] out of informational information management equipment adjusts the above-mentioned weighting factor in the composition of invention according to claim 11 so that the amount of change of an informational significance may become large, as mentioned above.
[0197] According to the above-mentioned composition, in the information by which output operation was carried out, significance becomes large relatively. Consequently, information management equipment does so the effect that the significance more near a user's feeling is computable.
[0198] The information management equipment concerning invention of a claim 14 is the composition that the informational contents change operation adjusts the above-mentioned weighting factor rather than informational display operation in the composition of invention according to claim 11 as mentioned above so that the amount of change of an informational significance may become large.
[0199] According to the above-mentioned composition, significance of the information for which the contents were changed can be enlarged relatively. Consequently, information management equipment does so more exactly the effect that an informational significance is computable.
[0200] The information management equipment concerning invention of a claim 15 is the composition that the direction of output operation [operation / contents change / informational] out of informational information management equipment adjusts the above-mentioned weighting factor in the composition of invention according to claim 14 so that the amount of change of an informational significance may become large, as mentioned above.
[0201] According to the above-mentioned composition, significance becomes large relatively in the turn of the outputted information, the information for which the contents were changed, and the displayed information. Therefore, information management equipment does so the effect that significance can be computed more exactly.
[0202] When the 2nd-sort operation beforehand presumed that the information management equipment concerning invention of a claim 16 occurs frequently as mentioned above in the composition of invention according to claim 1, 2, 3, 4, 5, or 6 when the information concerned is unnecessary among the operations relevant to information is performed, it is the composition of adjusting the above-mentioned weighting factor so that the significance of the information concerned may become small.
[0203] An informational significance will become small if operation which occurs frequently when the user has judged

information to be unnecessary is performed according to the above-mentioned composition. Therefore, information management equipment can compute the significance which suited a user's operation inclination, and does so the effect that the time and effort at the time of information retrieval is reducible.
[0204] The information management equipment concerning invention of a claim 17 is equipped with a partial specification means to specify an informational operating part, in the composition of invention according to claim 5 or 6 as mentioned above, and the above-mentioned weighting-factor adjustment means is the composition of adjusting the keyword weighting factor of the keyword contained in the operating part concerned.
[0205] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed by whether it is contained in the operating part. Thereby, information management equipment does so the effect that the significance near a user's feeling is computable.
[0206] As mentioned above, the information management equipment concerning invention of a claim 18 is the composition of adjusting a keyword weighting factor so that the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained when a certain keyword is contained in a part for an informational display in the composition of invention according to claim 17.
[0207] According to the above-mentioned composition, in the keyword frequently contained in a part for a display, significance becomes large relatively. Consequently, information management equipment does so the effect that the significance near a user's feeling is computable.
[0208] When a certain keyword is contained in the deleted operating part in the composition of invention according to claim 17 as mentioned above, the information management equipment concerning invention of a claim 19 is the composition of adjusting a keyword weighting factor so that the significance of the keyword concerned may become small rather than the case where the keyword concerned is not contained.
[0209] According to the above-mentioned composition, in the keyword deleted frequently, significance becomes small relatively as a result of informational contents correction. Consequently, information management equipment does so the effect that the significance near a user's feeling is computable.
[0210] When a certain keyword is contained in the inputted character string in the composition of invention according to claim 5 or 6 as mentioned above, the information management equipment concerning invention of a claim 20 is the composition of adjusting a keyword weighting factor so that the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained.
[0211] According to the above-mentioned composition, in the keyword frequently contained in an input character string, significance becomes large relatively. Thereby, information management equipment does so the effect that the significance near a user's feeling is computable.
[0212] The information management equipment concerning invention of a claim 21 is equipped with a discernment means to discriminate the use of the above-mentioned input character string, in the composition of invention according to claim 20 as mentioned above, and the above-mentioned weighting-factor adjustment means is the composition of changing the amount of adjustments of a keyword weighting factor according to the use of the above-mentioned input character string.
[0213] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed according to the use of an input character string. Here, even if the grade than to which a user attaches greater importance to input-statement character queue length and the keyword in an input character string is the case where it differs for every use, the significance near a user's feeling can be computed and the effect that the time and effort at the time of information retrieval is reducible is done so.
[0214] As mentioned above, the information management equipment concerning invention of a claim 22 is the composition of adjusting the above-mentioned keyword weighting factor so that the amount of change of the significance of a keyword may become large rather than the case where a use is an informational new addition when the use of the above-mentioned input character string is information retrieval in the composition of invention according to claim 21.
[0215] According to the above-mentioned composition, the significance of the keyword used in the case of information retrieval becomes large relatively. Therefore, information management equipment does so the effect that the significance near a user's feeling is computable.
[0216] As mentioned above, the information management equipment concerning invention of a claim 23 is the composition of adjusting the above-mentioned keyword weighting factor so that the significance of a keyword may become large rather than the case where a use is an informational new addition when the use of the above-mentioned input character string is informational contents correction in the composition of invention according to claim 21.
[0217] According to the above-mentioned composition, the significance of the keyword used for contents correction becomes large relatively. Therefore, information management equipment does so the effect that the significance near a user's feeling is computable.
[0218] As mentioned above, the information management equipment concerning invention of a claim 24 is the composition of adjusting the above-mentioned keyword weighting factor so that the significance of a keyword may become large rather than the case where a use is informational contents correction when the use of the above-mentioned input character string is information retrieval in the composition of invention according to claim 23.
[0219] According to the above-mentioned composition, as for the keyword used for information retrieval, compared with the keyword used for contents correction, a relative significance becomes still larger. Therefore, information management equipment does so the effect that the significance near a user's feeling is computable.
[0220] The record medium concerning invention of a claim 25 is the composition that the program which performs the significance calculation process which computes the significance of the information concerned among the weighting factors created according to each information as mentioned above based on the weighting factor relevant to information, and the weighting-factor adjustment process of adjusting the weighting factor used at the above-mentioned significance calculation process according to the operation relevant to information is recorded.
[0221] If the program concerned of the above-mentioned composition is executed by computer, like the information management equipment of a claim 1, a weighting factor will be created according to information and will be adjusted according to the inclination of operation. Moreover, since the significance of each information is learned with the learning

system of an open sand mold, the weighting factor of each information can be adjusted irrespective of an informational significance. Therefore, even if it does not manage the significance of each information, the effect that the information management equipment which can compute the significance which suited each user and can be applied to the large range is realizable is done so.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

TECHNICAL FIELD

[The technical field to which invention belongs] this invention relates to the information management equipment which manages various information, and the record medium with which the program was recorded, changing an informational significance according to a user.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art] Conventionally, managing various information is widely performed using the computer etc. By the spread of large capacity CD-ROM record media, growing gigantic of the information database by development of an information network, etc., the amount of information managed with these information management equipments is in the inclination which increases increasingly, and is exceeding the amount of information in which arrangement and management by the help are possible. So, in recent years, the technology of the automatic arrangement and management by information management equipment itself is proposed.
[0003] For example, information management equipment given in JP,5-20362,A is arranging each document by analyzing the contents of the text stored per document, and associating between each document automatically based on the significance of each keyword, while extracting automatically the phrase (keyword) used as the key of each information. Thus, when information management equipment supports, the time and effort at the time of taking out the information which a user needs out of a lot of information is mitigable.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

EFFECT OF THE INVENTION

[Effect of the Invention] The information-management equipment concerning invention of a claim 1 is composition equipped with a weighting-factor storage means memorize the weighting factor used for significance calculation of the information which is created according to each information and related as mentioned above, a significance calculation means compute the significance of the information concerned based on the weighting factor relevant to information, and a weighting-factor adjustment means adjust the above-mentioned weighting factor according to the operation relevant to information.
[0173] According to the above-mentioned composition, a weighting factor is created according to information and adjusted according to the inclination of operation. Therefore, even if a user does not manage the significance of each information, information management equipment can compute the significance which suited each user. Consequently, in order to discover the information which a user needs, the effect that the time and effort at the time of arranging information is sharply reducible is done so. Moreover, since the significance of each information is learned with the learning system of an open sand mold, the effect of being widely applicable to the information management equipment in which the operation relevant to information is possible is done so.
[0174] The information management equipment concerning invention of a claim 2 is equipped with a history information-storage means by which the history information which shows the history of the operation relevant to information is stored in the composition of invention according to claim 1 as mentioned above, and the above-mentioned weighting-factor adjustment means is the composition of adjusting a weighting factor based on history information.
[0175] With the above-mentioned composition, when operation relevant to information is performed, the history information which shows the operation concerned is stored in a history information-storage means. Therefore, when significance calculation is directed, even if the adjustment method of a weighting factor is specified, a weighting factor can be adjusted by the adjustment method concerned, and information management equipment does so the effect that an informational significance can be computed more flexibly.
[0176] The information management equipment concerning invention of a claim 3 is the composition that the above-mentioned weighting-factor adjustment means changes the amount of adjustments of a weighting factor according to the time when operation was performed, in the composition of invention according to claim 2 as mentioned above.
[0177] According to the above-mentioned composition, in specific time, a user can increase the significance of the information conjectured to have judged that it is important. Consequently, the effect that the time and effort at the time of a user discovering the information on desired is further reducible is done so.
[0178] The information management equipment concerning invention of a claim 4 is the composition that the above-mentioned significance calculation means computes the significance of the information concerned based on the file weighting factor of the file by which information is accumulated, in the composition of invention according to claim 1, 2, or 3 as mentioned above.
[0179] With the above-mentioned composition, the file weighting factor used as a weighting factor is prepared for every file used as an informational accumulation unit, and is adjusted according to the operation relevant to information. Consequently, information management equipment can fluctuate an informational significance per file, and does so the effect that the time and effort at the time of information retrieval is reducible.
[0180] The information management equipment concerning invention of a claim 5 is composition which computes the significance of the information concerned based on the keyword weighting factor of each keyword from which the above-mentioned significance calculation means constitutes information in the composition of invention according to claim 1, 2, or 3 as mentioned above.
[0181] With the above-mentioned composition, when a certain information is operated, the significance of other information that the keyword in the information concerned is contained can be adjusted, and the effect that the time and effort at the time of information retrieval is reducible is done so.
[0182] The information management equipment concerning invention of a claim 6 is composition which computes the significance of the information concerned based on the file weighting factor of the file to which the above-mentioned significance calculation means accumulates information, and the keyword weighting factor which constitutes the information concerned in the composition of invention according to claim 5 as mentioned above.
[0183] According to the above-mentioned composition, the significance of analogous information can be adjusted, maintaining the difference of the significance of the operated information, and the significance of the above-mentioned analogous information. Consequently, the effect that the information management equipment which can be discovered earlier is [the both sides of the information and analogous information which carried out the direct control] realizable is done so.
[0184] As mentioned above, the information management equipment concerning invention of a claim 7 is the composition of adjusting the above-mentioned weighting factor so that informational display time is long in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, and the significance of the information concerned may become large.
[0185] According to the above-mentioned composition, a weighting factor can be adjusted and the effect that the time and effort at the time of information retrieval is reducible is done so so that the information that display time is long may have a big significance relatively.
[0186] It is the composition beforehand presumed that it occurs frequently as mentioned above in the composition of

invention according to claim 1, 2, 3, 4, 5, or 6 when the information management equipment concerning invention of a claim 8 attaches importance to the information concerned among the operations relevant to information of adjusting the above-mentioned weighting factor so that there is much number of times of the 1st-sort operation and the significance of the information concerned may become large.

[0187] When operation which occurs frequently in case a user judges the information concerned to be important is performed according to the above-mentioned composition, the significance of the information concerned becomes large. Consequently, information management equipment can compute the significance which suited a user's operation inclination, and does so the effect that the time and effort at the time of information retrieval is reducible.

[0188] The information management equipment concerning invention of a claim 9 is the composition of adjusting the above-mentioned weighting factor so that the value which broke the number of times of the 1st-sort operation by elapsed time among the operations relevant to information is large as mentioned above in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, and the significance of the information concerned may become large.

[0189] According to the above-mentioned composition, even if it is the case that the number of times of operation is the same, significance of the information created recently can be enlarged. Consequently, information management equipment does so the effect that the significance more near a user's feeling is computable.

[0190] The information management equipment concerning invention of a claim 10 is the composition that at least one of informational presenting, an output out of informational information management equipment, and contents change of information is contained in the 1st-sort [above-mentioned] operation, in the composition of invention according to claim 8 or 9 as mentioned above.

[0191] In the information to which the display and the output out of information management equipment were performed, and a contents change was made, with the above-mentioned composition, significance becomes large relatively. Consequently, information management equipment does so the effect that the significance more near a user's feeling is computable.

[0192] The information management equipment concerning invention of a claim 11 is the composition of changing the amount of adjustments of the above-mentioned weighting factor according to the contents of operation of the 1st-sort above-mentioned] operation, in information management equipment according to claim 8 or 9 as mentioned above.

[0193] According to the above-mentioned composition, since it changes according to the kind of operation, the amount of adjustments of a weighting factor can reduce gap between the significance which information computes, and the significance which a user senses. Consequently, information management equipment does so the effect that a more exact significance is computable.

[0194] The information management equipment concerning invention of a claim 12 is the composition that the direction of display operation of needing regeneration in the composition of invention according to claim 11 adjusts the above-mentioned weighting factor so that the amount of change of an informational significance may become large, as mentioned above.

[0195] According to the above-mentioned composition, in the information to which regeneration is carried out frequently, significance becomes high relatively. Thereby, information management equipment does so more exactly the effect that an informational significance is computable.

[0196] The information management equipment concerning invention of a claim 13 is the composition that the direction of output operation [operation / display / informational] out of informational information management equipment adjusts the above-mentioned weighting factor in the composition of invention according to claim 11 so that the amount of change of an informational significance may become large, as mentioned above.

[0197] According to the above-mentioned composition, in the information by which output operation was carried out, significance becomes large relatively. Consequently, information management equipment does so the effect that the significance more near a user's feeling is computable.

[0198] The information management equipment concerning invention of a claim 14 is the composition that the informational contents change operation adjusts the above-mentioned weighting factor rather than informational display operation in the composition of invention according to claim 11 as mentioned above so that the amount of change of an informational significance may become large.

[0199] According to the above-mentioned composition, significance of the information for which the content was changed can be enlarged relatively. Consequently, information management equipment does so more exactly the effect that an informational significance is computable.

[0200] The information management equipment concerning invention of a claim 15 is the composition that the direction of output operation [operation / content change / informational] out of informational information management equipment adjusts the above-mentioned weighting factor in the composition of invention according to claim 14 so that the amount of change of an informational significance may become large, as mentioned above.

[0201] According to the above-mentioned composition, significance becomes large relatively in the turn of the outputted information, the information for which the content was changed, and the displayed information. Therefore, information management equipment does so the effect that significance can be computed more exactly.

[0202] When the 2nd-sort operation beforehand presumed that the information management equipment concerning invention of a claim 16 occurs frequently as mentioned above in the composition of invention according to claim 1, 2, 3, 4, 5, or 6 when the information concerned is unnecessary among the operations relevant to information is performed, it is the composition of adjusting the above-mentioned weighting factor so that the significance of the information concerned may become small.

[0203] An informational significance will become small if operation which occurs frequently when the user has judged information to be unnecessary is performed according to the above-mentioned composition. Therefore, information management equipment can compute the significance which suited a user's operation inclination, and does so the effect that the time and effort at the time of information retrieval is reducible.

[0204] The information management equipment concerning invention of a claim 17 is equipped with a partial specification means to specify an informational operating part, in the composition of invention according to claim 5 or 6 as mentioned above, and the above-mentioned weighting-factor adjustment means is the composition of adjusting the keyword weighting

factor of the keyword contained in the operating part concerned.
[0205] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed by whether it is contained in the operating part. Thereby, information management equipment does so the effect that the significance near a user's feeling is computable.
[0206] As mentioned above, the information management equipment concerning invention of a claim 18 is the composition of adjusting a keyword weighting factor so that the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained when a certain keyword is contained in a part for an informational display in the composition of invention according to claim 17.
[0207] According to the above-mentioned composition, in the keyword frequently contained in a part for a display, significance becomes large relatively. Consequently, information management equipment does so the effect that the significance near a user's feeling is computable.
[0208] When a certain keyword is contained in the deleted operating part in the composition of invention according to claim 17 as mentioned above, the information management equipment concerning invention of a claim 19 is the composition of adjusting a keyword weighting factor so that the significance of the keyword concerned may become small rather than the case where the keyword concerned is not contained.
[0209] According to the above-mentioned composition, in the keyword deleted frequently, significance becomes small relatively as a result of informational contents correction. Consequently, information management equipment does so the effect that the significance near a user's feeling is computable.
[0210] When a certain keyword is contained in the inputted character string in the composition of invention according to claim 5 or 6 as mentioned above, the information management equipment concerning invention of a claim 20 is the composition of adjusting a keyword weighting factor so that the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained.
[0211] According to the above-mentioned composition, in the keyword frequently contained in an input character string, significance becomes large relatively. Thereby, information management equipment does so the effect that the significance near a user's feeling is computable.
[0212] The information management equipment concerning invention of a claim 21 is equipped with a discernment means to discriminate the use of the above-mentioned input character string, in the composition of invention according to claim 20 as mentioned above, and the above-mentioned weighting-factor adjustment means is the composition of changing the amount of adjustments of a keyword weighting factor according to the use of the above-mentioned input character string.
[0213] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed according to the use of an input character string. Here, even if the grade than to which a user attaches greater importance to input-statement character queue length and the keyword in an input character string is the case where it differs for every use, the significance near a user's feeling can be computed and the effect that the time and effort at the time of information retrieval is reducible is done so.
[0214] As mentioned above, the information management equipment concerning invention of a claim 22 is the composition of adjusting the above-mentioned keyword weighting factor so that the amount of change of the significance of a keyword may become large rather than the case where a use is an informational new addition when the use of the above-mentioned input character string is information retrieval in the composition of invention according to claim 21.
[0215] According to the above-mentioned composition, the significance of the keyword used in the case of information retrieval becomes large relatively. Therefore, information management equipment does so the effect that the significance near a user's feeling is computable.
[0216] As mentioned above, the information management equipment concerning invention of a claim 23 is the composition of adjusting the above-mentioned keyword weighting factor so that the significance of a keyword may become large rather than the case where a use is an informational new addition when the use of the above-mentioned input character string is informational contents correction in the composition of invention according to claim 21.
[0217] According to the above-mentioned composition, the significance of the keyword used for contents correction becomes large relatively. Therefore, information management equipment does so the effect that the significance near a user's feeling is computable.
[0218] As mentioned above, the information management equipment concerning invention of a claim 24 is the composition of adjusting the above-mentioned keyword weighting factor so that the significance of a keyword may become large rather than the case where a use is informational contents correction when the use of the above-mentioned input character string is information retrieval in the composition of invention according to claim 23.
[0219] According to the above-mentioned composition, as for the keyword used for information retrieval, compared with the keyword used for contents correction, a relative significance becomes still larger. Therefore, information management equipment does so the effect that the significance near a user's feeling is computable.
[0220] The record medium concerning invention of a claim 25 is the composition that the program which performs the significance calculation process which computes the significance of the information concerned among the weighting factors created according to each information as mentioned above based on the weighting factor relevant to information, and the weighting-factor adjustment process of adjusting the weighting factor used at the above-mentioned significance calculation process according to the operation relevant to information is recorded.
[0221] If the program concerned of the above-mentioned composition is executed by computer, like the information management equipment of a claim 1, a weighting factor will be created according to information and will be adjusted according to the inclination of operation. Moreover, since the significance of each information is learned with the learning system of an open sand mold, the weighting factor of each information can be adjusted irrespective of an informational significance. Therefore, even if it does not manage the significance of each information, the effect that the information management equipment which can compute the significance which suited each user and can be applied to the large range is realizable is done so.

[Translation done.]

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, since the significance which a user senses differs for every user in many cases, with the above-mentioned conventional information management equipment, sufficient support which suited each user's intention produces the problem of being difficult.
[0005] Specifically, since the keyword was mechanically extracted from the informational contents and each information is managed, each information is classified according to the information management equipment of the above-mentioned composition from a common viewpoint by each user. On the other hand, generally the significance which a user senses changes for every user with various factors, such as a user's occupational description, interest, etc. Therefore, gap occurs between the significance which information management equipment manages, and the significance which the user of the information management equipment concerned senses, and the information management equipment of the above-mentioned composition is difficult for managing information with the significance according to each user. Consequently, with the above-mentioned information management equipment, the support which suited the user is difficult and it is hard to say that the time and effort for taking out the information which a user needs is fully cut down.
[0006] Here, the method into which each user is made to change the significance of a keyword is mentioned as a method of conquering the above-mentioned trouble. However, it is difficult even for a user to only usually recognize other size, ratios, etc. with significance of a keyword, and to set the significance of a keyword as a desired value, in case a user recognizes the significance of a keyword. Furthermore, since the amount of a keyword increases as an informational amount increases, with the above-mentioned composition, a user will manage a lot of keywords. Therefore, from informational significance management, while a user is opened wide, he newly needs to manage a keyword. Consequently, in order to take out required information, still, about much time and effort, it is required and has become a user's burden. Furthermore, there is also a possibility that it may become impossible to be unable to manage a keyword, with increase of amount of information.
[0007] As an option in which the significance which a user senses is made to reflect to information management equipment on the other hand, by JP,6-130921,A, the composition to which the learning control of the weighting factor at the time of display layout calculation is carried out is indicated so that the display layout based on the significance which information management equipment computed may be in agreement with the display layout which a user directs. However, with the composition concerned, since a user needs to specify desired value with learning control, information management equipment cannot apply to general operation.
[0008] Furthermore, a weighting factor given in the official report concerned is a parameter at the time of combining mutually basic importance functions in significance calculation, such as a structural importance function and a semantic importance function. So, correction of a weighting factor is difficult for being reflected as correction of the plan at the time of determining a display layout, and changing the significance of each information itself.
[0009] Moreover, since it is indispensable to express as the display layout according to significance, the kind of display and the use of information management equipment are limited. The scope of information management equipment will be limited these results.
[0010] this invention is to offer the information management equipment which can manage information, being made in view of the above-mentioned trouble, and being able to apply the purpose to the large range, and changing significance according to a user.

[Translation done.]

* NOTICES *

MEANS

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, the information-management equipment concerning invention of a claim 1 is created according to each information, and is characterized by to have a weighting-factor storage means memorize the weighting factor used for significance calculation of related information, a significance calculation means compute the significance of the information concerned based on the weighting factor relevant to information, and a weighting-factor adjustment means adjust the above-mentioned weighting factor according to the operation relevant to information.

[0012] In addition, by the time a significance calculation means ends informational significance calculation, as long as it can adjust a weighting factor, a weighting-factor adjustment means may update the value stored in the weighting-factor storage means, and after being read from a weighting-factor storage means, you may adjust, for example. Moreover, what is necessary is just to adjust at least one of the weighting factors, when two or more weighting factors are used, in case the significance of a certain information is computed. Moreover, each operation is good also considering the whole (file) information as a candidate for operation, and can also make informational [a part of] applicable to operation.

[0013] In the above-mentioned composition, every keyword which are every file which is an informational accumulation unit, and the unit which constitutes information is created according to each information, and a weighting factor is stored in a weighting-factor storage means. Moreover, a weighting-factor adjustment means adjusts the above-mentioned weighting factor, when operations relevant to information, such as operation to the information currently displayed and operation to the file by which information is accumulated, are performed for example. Furthermore, a significance calculation means computes the significance of the information concerned based on the weighting factor relevant to information.

[0014] According to the above-mentioned composition, even if, especially as for the significance of each information, a user does not direct significance, the information used as the candidate for operation, a file, the distribution of a keyword, a kind, timing of operation, etc. are automatically adjusted according to a user's operation inclination, for example. For example, if how the significance of the information concerned becomes large is chosen as the adjustment method of a weighting factor whenever information is operated, significance will become large more relatively [information with more number of times of operation]. Even if a user does not manage the keyword for reference or does not manage the significance of each information by this, information management equipment can compute the significance which suited each user. Consequently, in order to discover the information which a user needs, the time and effort at the time of arranging information is sharply reducible.

[0015] Moreover, the weighting factor is created according to information and adjusted according to the inclination of operation. Thus, since the significance of each information is learned with the learning system of an open sand mold, the weighting factor of each information can be adjusted irrespective of an informational significance. Therefore, while expressing each information as the layout according to significance, unlike the conventional technology which carries out the learning control of the weighting factor peculiar to a system, a scope is not limited but it can apply to the information management equipment in which the operation relevant to information is possible widely so that it may agree with the layout directed by the user.

[0016] The information management equipment concerning invention of a claim 2 is equipped with a history information-storage means by which the history information which shows the history of the operation relevant to information is stored in the composition of invention according to claim 1, and the above-mentioned weighting-factor adjustment means is characterized by adjusting a weighting factor based on history information.

[0017] With the above-mentioned composition, when operation relevant to information is performed, the history information which shows the operation concerned is stored in a history information-storage means. Here, if history information is referred to, a weighting-factor adjustment means can adjust a weighting factor, for example, even if it is a time of time having passed since the operation time, when a user directs informational significance calculation. Therefore, when significance calculation is directed, even if the adjustment method of a weighting factor is specified, a weighting factor can be adjusted by the adjustment method concerned. Consequently, information management equipment can compute an informational significance more flexibly.

[0018] Furthermore, the information management equipment concerning invention of a claim 3 is characterized by the above-mentioned weighting-factor adjustment means changing the amount of adjustments of a weighting factor according to the time when operation was performed in the composition of invention according to claim 2.

[0019] Generally, the significance which a user senses is changing in connection with the passage of time. Therefore, it is judged that it is important for a certain time, and even if it is the information operated frequently, it may be judged at another time that it is not not much important.

[0020] According to the above-mentioned composition, the amount of adjustments of a weighting factor is changed according to the time when operation was performed. Therefore, the amount of adjustments of the weighting factor resulting from operation of specific time can be set as a different value from the case in residual time. Thereby, in specific time, a user can increase the significance of the information conjectured to have judged that it is important. Consequently, the time and effort at the time of a user discovering the information on desired is further reducible.

[0021] Moreover, the information-management equipment concerning invention of a claim 4 is equipped with a file

weighting-factor storage means to by_which the file weighting factor whose above-mentioned weighting-factor storage means is an informational storing unit and in which it was prepared for every file is memorized as the above-mentioned weighting factor in the composition of invention according to claim 1, 2, or 3, and the above-mentioned significance calculation means is carrying out computing the significance of the information concerned as the feature based on the file weighting factor of the file by which information is accumulated. In addition, as long as the significance calculation means is computing an informational significance based on a file weighting factor, it may compute significance for the below-mentioned keyword weighting factor etc. by using other weighting factors together.

[0022] With the above-mentioned composition, the file weighting factor used as a weighting factor is prepared for every file used as an informational accumulation unit, and is adjusted according to the operation relevant to information. Consequently, information management equipment can fluctuate an informational significance per file.

[0023] Here, in case a user operates information, he makes applicable to operation a file, such as opening the file by which the information concerned was accumulated and displaying information, in many cases. Therefore, the significance which suited a user's operation inclination can be computed and a user can discover required information early more because information management equipment fluctuates significance per file.

[0024] By the way, as the above-mentioned information, the information on various form, such as not only a character but a picture and voice, can be considered. Also in this, like the information which consists of a character, when information consists of keywords which are units with a meaning, if the weighting factor corresponding to a keyword is prepared, it is effective.

[0025] That is, the information-management equipment concerning invention of a claim 5 is equipped with a keyword weighting-factor storage means to by_which the keyword weighting factor from which the above-mentioned weighting-factor storage means constitutes information and which was prepared for every keyword is memorized as the above-mentioned weighting factor in the composition of invention according to claim 1, 2, or 3, and the above-mentioned significance calculation means is characterized by to compute the significance of the information concerned based on the keyword weighting factor of each keyword which constitutes information. In addition, as long as it is computing an informational significance based on a keyword weighting factor, you may use together other weighting factors, such as the above-mentioned file weighting factor.

[0026] With the above-mentioned composition, the keyword weighting factor used as a weighting factor is prepared for every keyword which constitutes information, and is adjusted according to the operation relevant to the information containing the keyword concerned. Therefore, when a certain information is operated, the significance of other information containing the keyword in the information concerned is adjusted.

[0027] Here, the information in which many keywords are contained in common is a mutually similar content in many cases, and a user also judges the information on a content similar to the information concerned to be important in many cases, when judging a certain information to be important. Therefore, by adjusting a keyword weighting factor, the significance which suited a user's operation inclination can be computed and a user can discover required information early more.

[0028] By the way, when a significance calculation means computes significance only based on a file weighting factor and a certain information is operated, only the significance of the information concerned changes and the significance of other information does not change. Therefore, in case information with the content similar to the information concerned is searched, this fear has time and effort. On the other hand, when computing significance only based on a keyword weighting factor, the significance of the operated information and the significance of information with the content similar to the information concerned become near, and there is a possibility of being hard that it may come to find the operated information.

[0029] On the other hand, the information management equipment concerning invention of a claim 6 In the composition of invention according to claim 5 the above-mentioned weighting-factor storage means The file weighting factor which is an informational storing unit and which was prepared for every file is equipped with the file weighting-factor storage means memorized as the above-mentioned weighting factor. the above-mentioned significance calculation means Based on the file weighting factor of the file which accumulates information, and the keyword weighting factor which constitutes the information concerned, it is characterized by computing the significance of the information concerned. In addition, as long as both weighting factors are used for informational significance calculation, you may use other weighting factors together.

[0030] With the above-mentioned composition, a significance calculation means computes significance based on a file weighting factor and a keyword weighting factor. Therefore, when a certain information is operated, while being able to change the significance of information with the content similar to the information concerned, the difference of the significance of the operated information and the significance of the above-mentioned analogous information can be maintained. Consequently, the information management equipment which can be discovered earlier is [the both sides of the information and analogous information which carried out the direct control] realizable.

[0031] Moreover, in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, the information management equipment concerning invention of a claim 7 is characterized by adjusting the above-mentioned weighting factor by the above-mentioned weighting-factor adjustment means so that informational display time is long, and the significance of the information concerned may become large.

[0032] In addition, display time may be time after being displayed on a screen until a display is completed, and is good also considering the time when two or more windows are overlapped, and a lap will be most displayed in the upper window (active window) if it is the display which can be displayed as display time. Moreover, while clocking the display time in each lap state independently, it is good also considering the value to which weight lapped to each display time so that it might become large, and the direction whose lap is a top attached and added the weight according to the state as display time.

[0033] According to the above-mentioned composition, if information is displayed, a weighting-factor adjustment means will adjust a weighting factor according to display time. Consequently, a weighting factor can be adjusted so that the information that display time is long may have a big significance relatively.

[0034] Compared with the information judged that the information which a user judges to be important is generally unnecessary, it is referred to frequently, and is displayed for a long time. Here, with the above-mentioned composition, since a weighting factor is adjusted according to display time, the significance which suited a user's operation inclination can be

computed and a user can discover required information early more.
[0035] Furthermore, in the composition of invention according to claim 1, 2, 3, 4, 5, or 6, the information management equipment concerning invention of a claim 8 is characterized by the thing for which the above-mentioned weighting-factor adjustment means was beforehand presumed to occur frequently when importance is attached to the information concerned among the operations relevant to information and which adjust the above-mentioned weighting factor so that there is much number of times of the 1st-sort operation, and the significance of the information concerned may become large.
[0036] When operations which occur frequently in case a user judges the information concerned to be important, such as operation relevant to a display, operation relevant to content change, operation relevant to informational reference, and operation that outputs information out of information management equipment, are performed, for example according to the above-mentioned composition, the significance of the information concerned becomes large. Consequently, information management equipment can compute the significance which suited a user's operation inclination, and a user can discover required information early more.
[0037] On the other hand, the information management equipment concerning invention of a claim 9 In the composition of invention according to claim 1, 2, 3, 4, 5, or 6 the above-mentioned weighting-factor adjustment means It is characterized by adjusting the above-mentioned weighting factor so that the value which was beforehand presumed to occur frequently when importance is attached to the information concerned among the operations relevant to information and which broke the number of times of the 1st-sort operation by elapsed time after information is created is large, and the significance of the information concerned may become large.
[0038] Here, generally, a user is created recently and attaches importance to the information used frequently in many cases at present. With the above-mentioned composition, when operation which occurs frequently in case the information concerned is judged to be important is performed, the significance of the information concerned becomes large. Moreover, the significance of the information concerned becomes small, so that the elapsed time after information is created increases. Consequently, even if it is the case that the number of times of operation is the same, significance of the information created recently can be enlarged and information management equipment can compute the significance more near a user's feeling.
[0039] Furthermore, the information management equipment concerning invention of a claim 10 is characterized by containing at least one of informational presenting, an output out of informational information management equipment, and content change of information in the 1st-sort [above-mentioned] operation in the composition of invention according to claim 8 or 9.
[0040] According to the above-mentioned composition, when informational display operation, output operation, or content change operation is performed, the significance of the information concerned becomes large. Here, as display operation, the display part change in a display start, a display halt, a whole display, sector display, and information, expansion, reduction, or the display-position change by the display screen is mentioned, for example. Moreover, printing, communication or record to a record medium, etc. is included in output operation. Furthermore, as content change operation, the addition of the content, correction of the content, a partial copy, partial deletion, etc. exist. Also among the operations relevant to information, these operations are frequently performed, when the user attaches importance to the information concerned. Consequently, information management equipment can compute the significance more near a user's feeling by adopting these operations as the 1st-sort [above-mentioned] operation.
[0041] By the way, as mentioned above, operation of various kinds exists in operation relevant to information, and the influences which operation frequency and one operation give each kind of operation to an informational significance differ in many cases mutually.
[0042] For example, since it carries out when it will judge that a character input has very much number of times of operation, and updating whose user is information is required for operation of saving a document to an informational significance seldom changing by one operation, if the case where a certain document was being edited was made into the example, although there is comparatively little number of times of operation, an informational significance changes comparatively a lot.
[0043] Therefore, in case a weighting factor is adjusted according to operation, when it adjusts uniformly by operation of various kinds, a possibility that gap may occur is between the significance which information management equipment computes, and the significance which a user senses.
[0044] On the other hand, the information management equipment concerning invention of a claim 11 is characterized by the above-mentioned weighting-factor adjustment means changing the amount of adjustments of the above-mentioned weighting factor according to the content of operation of the 1st-sort [above-mentioned] operation in information management equipment according to claim 8 or 9.
[0045] According to the above-mentioned composition, the amount of adjustments of a weighting factor changes according to the kind of operation. Consequently, gap between the significance which information computes, and the significance which a user senses can be reduced, and information management equipment can compute an informational significance more exactly.
[0046] Moreover, the information management equipment concerning invention of a claim 12 is characterized by the direction of display operation of needing regeneration adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means rather than the display operation with unnecessary regeneration in the composition of invention according to claim 11. In addition, as display operation which needs regeneration, back-scroll operation, change operation of a display position, etc. are mentioned.
[0047] When displaying many information simultaneously or displaying big information here, it is difficult to display all information required for a screen simultaneously. Therefore, pile up two or more information, and it displays, or displays informational [a part of] in many cases. In this case, since a user displays a desired portion, he rewrites a screen or displays again the information from which it separated from the viewing area of a screen using a back-scroll function etc. Consequently, for a user, an informational display state is changed frequently and regeneration of the more important information is carried out. According to the above-mentioned composition, in the information to which regeneration is carried out frequently, significance becomes high relatively. Thereby, information management equipment can compute an

informational significance more exactly.
[0048] Moreover, the information management equipment concerning invention of a claim 13 is characterized by the direction of output operation out of informational information management equipment adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means rather than informational display operation in the composition of invention according to claim 11.
[0049] According to the above-mentioned composition, in the information by which output operation was carried out, significance becomes large relatively. Here, the user has the intention of making it refer to to many people, when outputting a part of information and information in many cases, and greater importance is attached than to the information currently used within information management equipment to the information concerned. Consequently, information management equipment can compute the significance more near a user's feeling.
[0050] On the other hand than informational display operation, the information management equipment concerning invention of a claim 14 is characterized by the direction of informational content change operation adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means in the composition of invention according to claim 11.
[0051] According to the above-mentioned composition, when the content is changed, an informational significance becomes large rather than the case where it is only displaying. Here, when a user changes the informational content, the user has judged this information to be important in many cases. Therefore, information management equipment can compute an informational significance more exactly by enlarging relatively significance of the information for which the content was changed.
[0052] Furthermore, the information management equipment concerning invention of a claim 15 is characterized by the direction of output operation out of informational information management equipment adjusting the above-mentioned weighting factor so that the amount of change of an informational significance may become large by the above-mentioned weighting-factor adjustment means rather than informational content change operation in the composition of invention according to claim 14.
[0053] According to the above-mentioned composition, significance becomes large relatively in the turn of the outputted information, the information for which the content was changed, and the displayed information. Therefore, information management equipment can compute significance more exactly.
[0054] On the other hand, when the 2nd-sort operation in which the information management equipment concerning invention of a claim 16 was beforehand presumed to occur frequently in the composition of invention according to claim 1, 2, 3, 4, 5, or 6 when the above-mentioned weighting-factor adjustment means has the unnecessary information concerned among the operations relevant to information is performed, it is characterized by adjusting the above-mentioned weighting factor so that the significance of the information concerned may become small. In addition, operations of deleting information, such as operation of deleting the file by which information was accumulated as the 2nd-sort operation, for example, are mentioned.
[0055] In the above-mentioned composition, if the 2nd-sort operation is performed, an informational significance will fall rather than the case where it is not operated. Here, the 2nd-sort operation is operation which occurs frequently when the user has judged information to be unnecessary. Therefore, information management equipment can compute the significance which suited a user's operation inclination, and a user can discover required information early more.
[0056] By the way, when the object of operation is informational [a part of], the user has paid attention also in information to the operating part in many cases. Therefore, like the above-mentioned claim 5 or information management equipment given in six, when the weighting factor corresponds to the unit smaller than information, information management equipment can compute the significance near a user's feeling by changing the amount of adjustments of a weighting factor by whether it is contained in the operating part.
[0057] The information management equipment concerning invention of a claim 17 is specifically equipped with a partial specification means to specify an informational operating part, in the composition of invention according to claim 5 or 6, and the above-mentioned weighting-factor adjustment means is characterized by adjusting the keyword weighting factor of the keyword contained in the operating part concerned.
[0058] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed by whether it is contained in the operating part. Thereby, information management equipment can compute the significance near a user's feeling.
[0059] Furthermore, the above-mentioned weighting-factor adjustment means is characterized by adjusting a keyword weighting factor so that, as for the above-mentioned partial specification means, the information management equipment concerning invention of a claim 18 specifies a part for an informational display as an operating part in the composition of invention according to claim 17, and the significance of the keyword concerned may become large rather than the case where the keyword concerned is not contained, when a certain keyword is contained in the operating part concerned.
[0060] According to the above-mentioned composition, the direction in case the significance of a keyword is included in a part for a display becomes large. Therefore, in the keyword displayed frequently, significance becomes large relatively. Consequently, information management equipment can compute the significance near a user's feeling.
[0061] Moreover, in the composition of invention according to claim 17, when a certain keyword is contained in the operating part from which the above-mentioned weighting-factor adjustment means was deleted, the information management equipment concerning invention of a claim 19 is characterized by adjusting a keyword weighting factor so that the significance of the keyword concerned may become small rather than the case where the keyword concerned is not contained.
[0062] According to the above-mentioned composition, the direction in case the significance of a keyword is included in a deletion becomes small. Therefore, in the keyword deleted frequently, significance becomes small relatively as a result of informational content correction. Consequently, information management equipment can compute the significance near a user's feeling.
[0063] By the way, a keyword is contained not only in information but in character strings inputted by the user, such as a

character string at the time of searching information. Here, generally, in case a user inputs a character string, he has inputted the character string to which the user itself attaches importance. Therefore, by whether it is contained in a user's input character string, if the amount of change of the significance of a keyword is changed, the significance near a user's feeling is computable.
[0064] More specifically than the case where the keyword concerned is not contained, when a certain keyword is contained in the character string into which the information management equipment concerning invention of a claim 20 was inputted in the composition of invention according to claim 5 or 6, the above-mentioned weighting-factor adjustment means is characterized by adjusting a keyword weighting factor so that the significance of the keyword concerned may become large.
[0065] According to the above-mentioned composition, in the keyword frequently contained in an input character string, significance becomes large relatively. Thereby, information management equipment can compute the significance near a user's feeling.
[0066] Furthermore, the information management equipment concerning invention of a claim 21 is equipped with a discernment means to discriminate the use of the above-mentioned input character string, in the composition of invention according to claim 20, and the above-mentioned weighting-factor adjustment means is characterized by changing the amount of adjustments of a keyword weighting factor according to the use of the above-mentioned input character string.
[0067] According to the above-mentioned composition, the amount of adjustments of a keyword weighting factor is changed according to the use of an input character string. Here, as a use, content correction of an informational new input and information, reference, etc. are mentioned, and input-statement character queue length differs from the grade than to which a user attaches greater importance to the keyword in an input character string in many cases, for example. Therefore, information management equipment is changing the amount of adjustments according to a use, and can compute the significance near a user's feeling.
[0068] Moreover, in the composition of invention according to claim 21, when the use of the above-mentioned input character string is information retrieval, the information management equipment concerning invention of a claim 22 is characterized by adjusting the above-mentioned keyword weighting factor by the above-mentioned weighting-factor adjustment means so that the amount of change of the significance of a keyword may become large rather than the case where a use is an informational new addition.
[0069] According to the above-mentioned composition, significance becomes large relatively rather than the keyword by which the keyword used in the case of information retrieval is used for a new input. Here, especially at the time of information retrieval, only the keyword to which the user attaches importance is inputted in many cases, and not only the keyword to which the user attaches importance but the keyword relevant to the keyword concerned is inputted in many cases especially at the time of a new input. Therefore, information management equipment is enlarging significance of the keyword used for information retrieval, and can compute the significance near a user's feeling.
[0070] On the other hand than the case where a use is an informational new addition, in the composition of invention according to claim 21, when the use of the above-mentioned input character string is informational content correction, the information management equipment concerning invention of a claim 23 is characterized by adjusting the above-mentioned keyword weighting factor by the above-mentioned weighting-factor adjustment means so that the significance of a keyword may become large.
[0071] According to the above-mentioned composition, significance becomes large relatively rather than the keyword by which the keyword used for content correction is used for a new input. Here, in many cases, compared with the time of a new input, at the time of content correction, input-statement character queue length is short, and the content of the keyword to which importance is attached more is high to it. Therefore, information management equipment is enlarging significance of the keyword used for content correction, and can compute the significance near a user's feeling.
[0072] Furthermore, in the composition of invention according to claim 23, when the use of the above-mentioned input character string is information retrieval, the information management equipment concerning invention of a claim 24 is characterized by adjusting the above-mentioned keyword weighting factor by the above-mentioned weighting-factor adjustment means so that the significance of a keyword may become large rather than the case where a use is informational content correction.
[0073] According to the above-mentioned composition, as for the keyword used for information retrieval, compared with the keyword used for content correction, a relative significance becomes still larger. Here, in many cases, compared with the input character string at the time of content correction, the input character string at the time of information retrieval has short length, and its content of the keyword to which importance is attached is high. Therefore, information management equipment can enlarge further significance of the keyword used for information retrieval, and can compute the significance near a user's feeling.
[0074] Moreover, the record medium concerning invention of a claim 25 is characterized by to be recorded the program which performs the significance calculation process which computes the significance of the information concerned among the weighting factors created according to each information based on the weighting factor relevant to information, and the weighting-factor adjustment process of adjusting the weighting factor used at the above-mentioned significance calculation process according to the operation relevant to information, in order to solve the above-mentioned technical problem.
[0075] If the program concerned of the above-mentioned composition is executed by computer, like the information management equipment of a claim 1, a weighting factor will be created according to information and will be adjusted according to the inclination of operation. Therefore, even if it does not manage the significance of each information, information management equipment can compute the significance which suited each user, and in order that a user may discover required information, it can cut down sharply the time and effort at the time of arranging information.
[0076] Moreover, since the significance of each information is learned with the learning system of an open sand mold, the weighting factor of each information can be adjusted irrespective of an informational significance. Therefore, a scope is not limited but it can apply to the information management equipment in which the operation relevant to information is possible widely.
[0077]
[Embodiments of the Invention] [1st operation gestalt] It is as follows when 1 operation gestalt of this invention is explained

based on drawing 1 or drawing 7 . That is, changing an informational significance according to a user, the intelligent manufacturing system program concerning this operation gestalt is a system which manages various information, for example, when the information about a certain matter is sensed that a user is required, it emphasizes and displays the information that significance is big, and it is used in order to help discovery of the information concerned.
[0078] As shown in drawing 1 , the intelligent manufacturing system program 1 concerning this operation gestalt The information management equipment 2 which stores Information D, and the display 3 which displays Information D, For example, the operation input units 4 which operate information management equipment 2, such as a keyboard and a mouse, For example, network 5a, disk unit 5b, or printer 5c etc., It has external I/O equipment 5 which exchanges the exterior and Information D on information management equipment 2, and the significance Xs which information management equipment 2 computes can be brought close to the significance Xu which a user senses based on operation of a user.
[0079] Specifically, the above-mentioned information management equipment 2 is equipped with information storage section 11a which stores the information D itself, weighting-factor accumulation section 11b in which it is created according to Information D and weighting-factor P for significance calculation of Information D is stored, and history storage section 11c updated according to operation of a user as the storage section 11. In addition, weighting-factor accumulation section 11b corresponds to a weighting-factor storage means given in a claim, a file weighting-factor storage means, and a keyword weighting-factor storage means. Moreover, history storage section 11c corresponds to a history information-storage means.
[0080] Information storage section 11a concerning this operation gestalt has memorized the field of a character string at least as information D. In addition, Information D may include the fields other than characters, such as a picture and voice.
[0081] Moreover, the file weighting factor FP by which the above-mentioned weighting-factor accumulation section 11b was prepared in every [which is the accumulation unit of each information D] file F as weighting-factor P, the keyword weighting factor KP prepared in every [which constitutes each information D] keyword K -- storing -- **** -- a certain information DA -- significance XsA of </SUB> The information DA concerned File FA stored File weighting-factor FPA The information DA concerned Keyword KA1 to constitute -- Keyword weighting factor KPA1 -- It is computed by adding the sum total. In addition, below, the file weighting factor FP of explanation used for significance calculation of Information D for convenience and the keyword weighting factor KP are called weighting-factor [of the information D concerned] P.
[0082] Furthermore, for details, history storage section 11c mentions for example, display time, the number of times of operation, etc. later, although the information for adjusting each weighting-factor P is memorized according to operation of a user.
[0083] On the other hand, display-control section 12a, input-control section 12b, and information I/O control unit 12c are prepared as I/O control unit 12 for controlling each above-mentioned equipments 3-5. Moreover, display analyzor which analyzes the display of display 3 as analyzor 13 for analyzing Information D and operation based on I/O of display-control section 12a

---

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram in which showing 1 operation gestalt of this invention, and showing the important section composition of an intelligent manufacturing system program.
[Drawing 2] In the above-mentioned intelligent manufacturing system program, it is the flow chart which shows the outline of operation of information management equipment.
[Drawing 3] It is the flow chart which shows operation of the above-mentioned information management equipment at the time of an information input.
[Drawing 4] It is explanatory drawing in which showing operation of the above-mentioned information management equipment at the time of an information input, and showing the calculation method of a weighting factor.
[Drawing 5] When a weighting factor is adjusted according to the total display time, it is the flow chart which shows operation of the above-mentioned information management equipment.
[Drawing 6] In the above-mentioned intelligent manufacturing system program, it is the graph which shows change of a weighting factor when the display (operation) relevant to a weighting factor is performed.
[Drawing 7] In the above-mentioned intelligent manufacturing system program, it is the graph which shows change of a weighting factor when the display (operation) irrelevant to a weighting factor continues.
[Drawing 8] It is the flow chart which shows other operation gestalten of this invention and shows operation of the information management equipment in the case of adjusting a weighting factor according to the number of times of operation.
[Drawing 9] In the above-mentioned intelligent manufacturing system program, it is the graph which shows change of a weighting factor when operation conjectured that information is unnecessary is performed.
[Drawing 10] It is the flow chart which shows the operation gestalt of further others of this invention, and shows operation of the information management equipment in the case of adjusting a weighting factor according to the content of operation.
[Drawing 11] It is explanatory drawing in which showing operation of the above-mentioned information management equipment, and showing the case where a part for a new display is specified.
[Drawing 12] It is explanatory drawing in which showing operation of the above-mentioned information management equipment, and showing the case where the amount of [which was specified] display is not in agreement with the history for a display.
[Drawing 13] It is explanatory drawing in which showing operation of the above-mentioned information management equipment, and showing the case where the amount of [which was specified] display is in agreement with the history for a display.
[Drawing 14] It is the flow chart which shows the operation gestalt of further others of this invention, and shows operation of information management equipment when adjusting the keyword weighting factor of the keyword contained in a part for a display.
[Drawing 15] It is explanatory drawing showing operation of the above-mentioned information management equipment.
[Drawing 16] It is the flow chart which shows the operation gestalt of further others of this invention, and shows operation of information management equipment when adjusting the keyword weighting factor of the keyword contained in an input character string.
[Drawing 17] It is the timing chart which shows a relation with an informational creation and operation time, and shows the case where the number of times of operation differs.
[Drawing 18] It is the timing chart which shows a relation with an informational creation and operation time, and shows the case where the number of times of operation is the same, and creation stages differ.
[Drawing 19] It is the flow chart which shows the operation form of further others of this invention, and shows operation of information management equipment based on the stored history information when adjusting a weighting factor.
[Drawing 20] It is the timing chart which shows a relation with an informational creation and operation time, and shows the case where the number of times of operation and a creation time are mutually the same, and operation times differ.
[Description of Notations]
2 Information Management Equipment
11b Weighting-factor accumulation section (weighting-factor storage means; file weighting-factor storage means; keyword weighting-factor storage means)
11c History storage section (history information-storage means)
13a Display analysis section (partial specification means)
14a Weighting-factor processing section (weighting-factor adjustment means)
14b Significance calculation section (significance calculation means)
15 Information-Control Section (Discernment Means)

[Translation done.]